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Address.*

HELEN HOMANS.

BY FREDERIC A. WASHBURN,

Late Colonel, M. C., U. S. Army, and Chief Surgeon, Base Section No. 3, American Expeditionary Forces.

WE have assembled today to pay tribute to the memory of Helen Homans. She gave her life for France in the World War just as truly as though she had been killed upon the field of battle.

The blood that is within the veins of a man or woman, the family heritage, traditions, and teaching are what determine the conduct of an individual when the time comes for great decisions.

An examination of the antecedents and background of Helen Homans' life furnishes the clue to her actions. Her family has been noted for its connection with medical work and for its patriotic response to the call of the nation in the time of peril. With the exception of a few years at the beginning of the nineteenth century, an interval between the death of one ancestor and the maturity of his son, there has been a John Homans practicing medicine in this vicinity since 1775. Helen Homans' great grandfather, Dr. John Homans, was a surgeon in the Continental Army during the Revolutionary War. From this descent her eldest brother Robert is a member of the Society of the Cincinnati. Her grandfather, Dr. John Homans, was a practicing physician. Her father, again the same name, Dr. John Homans, is well remembered by most of us in this room.

He was graduated as house pupil of this hospital in 1861, joined the regular navy upon graduation, served with it for one year, and resigned to accept a commission in the Medical Corps of the United States Army. He was on duty with the army until the close of the Civil War, from 1862 to 1865. His service was conspicuous and distinguished, well illustrated by the fact that he was medical director upon General Sheridan's staff during the Shenandoah campaign of 1864. None but an able man of initiative and courage would have been chosen for such a position. Uncle John, as we house officers called him, served this hospital from 1876 to 1899 actively, and as consulting surgeon until his death in 1903. We remember him affectionately for his humor, quick appreciation, impatience with pretence, and underlying warmheartedness. His chief claim for distinction here, and that a great one, is that he forced the hospital to permit abdominal surgery to be done within its walls against the opposition of a too conservative board of directors and staff.

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* Delivered December 11, 1919, at the Massachusetts General Hospital, upon the occasion of the unveiling of a tablet to Miss Helen Homans.

Miss Helen Homans' cousin, another Dr. John Homans, was a house officer of this hospital. One of her brothers, again a surgeon, and a graduate of the Massachusetts General Hospital, is the present representative of the name. Three of her brothers were commissioned officers of the United States Army, serving with the American Expeditionary Forces.

HELEN HOMANS

herself was connected with the Massachusetts General Hospital upon the Board of Visiting Ladies, from 1912 to 1917. She was a volunteer in the Social Service Department, working especially with tuberculosis patients during this same period, the latter part of the time working here in the short intervals between the periods of her service in France.

I have gone into some detail of the ancestry of Helen Homans and her previous hospital work to show how naturally she would come to connect herself with medical activities in a military emergency.

She had lived in France for a number of months at one time and grown to love the country. When the brutal attack was made by Germany and all civilization was imperiled, when her beloved France was writhing under the tortures, the agony and death of her children, Helen Homans suffered with her, and longed for the chance to help. The opportunity came when the first Harvard Unit went abroad; and she went with it. She performed the work of a nurse at l'Hôpital de L'Alliance, No. 41, bis Yoetot Seine Tuferience from May to September, 1915, and again from February to December, 1916. Then for a short period she was in another French hospital. From January to September, 1917, she served in l'Hôpital Auxiliare 109 at Pont Audemes, Eure; and from September, 1917, to February, 1918, she was with l'Hôpital d'Evacuation, No. 18, as a member of the Ambulance Automobile Chirurgicale Nos. 21 and 22, Vasseny, Aisne. Her last position was with l'Hôpital de l'Armée 65 at Pontoise, Seine et Oise, where she served from July to November, and where she died of pneumonia following influenza in the terrible epidemic of that fall.

When taken sick she was in charge of a ward of French wounded. The hospital had been under bombardment and the service was hard and hazardous.

Her services were appreciated by the French authorities, and she was awarded the Croix de Guerre with Palm, in a citation signed by the great French General, Petain, himself. Translated it reads as follows:

> MISS HELEN HOMANS
>
> "With the armies since the twenty-ninth of February, 1916, she has been noted for her absolute devotion to duty, particularly in the Evacuation Hospitals at Courlandon and Vasseny in the bombarded zone and in an Auxiliary Hospital of the Army where she has contracted in caring for the sick wounded soldiers a contagious disease which places her life in danger."
>
> Given at Great Headquarters by the General, Commander-in-Chief, Petain.

What greater honor!

Well earned—we her friends know it to be.

She laid down her life for the France that she loved and "greater love hath no man than this."

Helen Homans would not wish the claim made for her that the free gift of her all to the cause was an exceptional act amongst the women of the warring countries. Anyone who was privileged to see the work and the sacrifice of the women of England, France and America, appreciates that such devotion was the usual thing.

The physicians and nurses connected with this hospital responded in large numbers to their country's call. Five physicians and seven nurses made the last sacrifice for the great cause.

I like to think that the training and the standards of this hospital were an inspiration to its children, and that the thought of it helped them to run straight even when death itself was the goal. Can we, who have been spared, allow an institution which has produced such offspring to fail to progress and develop, and then fall behind? That is what is happening and will continue unless there is a united effort immediately to provide her with the sinews of war.

The Board of Visiting Ladies have given this tablet to Helen Homans' memory. The work of Boston women at this hospital has for many years been conspicuous. They have given freely of their time, strength, and money. They have helped us to keep the human side of our work prominent, and their ideals have always been high for what this hospital should be. It is therefore fitting that a tablet should be erected in this room to one of their number.

I take this opportunity to pay my tribute to the wonderful courtesy, kindness, and hospitality shown the Americans by both English and French. In England the houses of the people were thrown open to our convalescent soldiers. Several thousands of our men upon leaving the hospitals went into British homes and stayed for a week or ten days before rejoining their organizations. This was allowed with some hesitation, but there were surprisingly few instances where difficulties ensued. Thousands of our men became better acquainted with their British brothers, and they in turn learned to know the Yankees.

In those trying days of October, 1918, when we in England were receiving into our hospitals the American wounded from Flanders, and at the same time transport after transport arrived from America with many cases of influenza and pneumonia, the Chief Surgeon had a conference with General Sir John Goodwin, Director General, R. A. M. C., as to the disposition of our sick and wounded when our own hospital capacity should be exceeded. General Goodwin's reply was, "While there is a bed in England it shall be at the disposal of the Americans." This was when the British casualties were coming into England at the rate of 3,000 to 4,000 daily, and ours at the rate of 300 to 400 daily. Our hospital capacity in England at that time was 15,000 beds, limited to that number, because we were not allowed additional medical personnel which was needed more desperately in France at the moment.

Our hospitals in England were visited by the King and Queen, and Princess Mary, and many distinguished citizens and high officers of the army and navy. Dances, theatrical performances, prize fights, and many other forms of amusement were arranged for our soldiers on leave in England, and there seemed no limit to what the British tried to do for us.

Americans living in England did much. Lady Harcourt ran a small hospital for us in Lancaster Gate, London. Mrs. Spender Clay conducted an Officers' Convalescent Home at Ford Manor, Lynnfield. Sir William and Lady Osler kept open house for American Medical Officers at Oxford. Those who partook of their delightful hospitality will never forget it. Sir William made American and British physicians know each other as they never would have done without him.

In France there was the same spirit. It is harder for a Frenchman than for an Englishman to take an American into his home, but it was done in thousands of instances. In Bordeaux many of us made firm friendships and delightful acquaintances. The appreciation of the French for what America was doing was great. This was more openly shown by the humble peasants. It was touching and embarrassing to those of us who thought we should be doing more, and that our help should have come much sooner.

I remember that upon the anniversary of the sailing of Rochambeau from Bordeaux, on his way to Newport, the school at Talence closed early and the children brought a basket of flowers decorated with French and American colors to the American Hospital in their midst.

We who have lived among them know the sincere and earnest desire of the British and French peoples to live in harmony and union with us, and with us to bear the burdens of this distressed world, and solve its mighty problems. When we think of this, and contemplate the sacrifice of the noblest and best youth of these nations, one is tempted to offer a prayer that the gift may have its complete reward; that having frustrated the foul designs of Germany, we may succeed in forming a Union of Nations which will endure and make war more and more difficult. Politics and obstinacy delay the making of a peace and the establishment of some form of a League of Nations. Can we look upon our dead and tolerate that such motives should stand between the civilized world and the consummation of its victory?

Helen Homans' life was one of service. The gift of this life to France was cheerfully and gladly made.

May this tablet commemorate these qualities of hers and be an inspiration to the coming generations of young men and women who shall use this library.

Original Articles.

INTESTINAL OBSTRUCTION.*

By E. A. Codman, M.D., Boston.

I feel it a great honor to be asked a second time to speak before this Academy, and only regret that I could not have been here on the first occasion. Besides the honor of being asked to address you, I find myself indebted to you for other things. In the first place, any medical society which asks me to address it, thereby puts itself, in a measure, on record as approving of the movement toward hospital standardization, even though, as in the present instance, my subject is a surgical one.

In the second place, this occasion has led me to read a paper by Fitz on "Intestinal Obstruction," published in the *Transactions of the Congress of American Physicians and Surgeons*, Volume 1, 1888. Many of us here studied under Fitz, but in our thoughtless student days I doubt if most of us realized what a privilege it was. We have all known of his original work on appendicitis and pancreatitis, but few probably realize that he also set the pace on acute intestinal obstruction. Osler accepts his work as a standard.

Fitz's paper was purely analytical—an academic work. There are few case reports and little mention of his own experience. He simply summarizes the recorded experience of his time. It is not original as is the appendicitis work, but forms a necessary step in the consolidation of the subject. Someone has to do such painstaking work before any surgical subject becomes an entity for us to discuss and teach. Before his time, cases of peritonitis were so much confused with mechanical obstruction, that his greatest difficulty seems to have been in weeding out peritonitis reports in order to get a series of known obstruction cases. Today, it is not even necessary to speak of peritonitis in discussing this subject, for we all think we know the difference at once, as far as pathology goes, although the differential diagnosis in the individual case still puzzles us. Think of it! He was able to collect only 295 cases, operated and unoperated, in a careful review of the English, French, and German literature for the preceding eight years. Today any single clinic could probably furnish a larger number; more difficulty would be found in obtaining a logical and energetic young man to make such a scholarly analysis of them. The work would be much more valuable, because these modern records are more careful, accurate and well preserved than the fragmentary records that were kept in hospitals in those days. After all, Fitz's paper is now out of date. It is scarcely instructive except as an example of inspiring energy. It is of as little practical use as the chart of an early explorer would be to the captain of an ocean liner. Yet there is nothing better to quote today. As far as I know, no such analytic paper has been written since, nor does there seem to be any inducement to young men to do such work. This is a cutting age.

I plead guilty myself. The paper which I have to give you is a mere talk on my personal experience, taking advantage of my position as a guest to rehearse to you stories of cases which would bore you individually. In fact, the third thing for which I have to thank you is for the self-satisfaction of finding that my own cases have done so well. The reason I chose the present subject was, that, at the moment your Secretary's invitation arrived, I had just operated on a most interesting case of obstruction. Later I looked up all my cases and found to my great surprise that the last 27 cases had all recovered—that is as far as the relief of the obstruction was concerned, although some died later from other causes. This is a contrast to the time of Fitz, when Senn in an able paper at the same symposium, gave the surgical mortality as about 69%, and it was still being debated whether medical or surgical treatment gave the best chance. The discussion following these papers of Fitz and Senn is interesting. The various distinguished authorities attending the congress evidently thought themselves very radical in setting two days as the proper time to continue medical treatment before sending for a surgeon. Fitz winds up his paper as follows: "Its treatment is surgical, on or after the third day, if the symptoms are urgent and forced injections fail to relieve." No wonder the surgeons of that time had a high mortality. Today we know that to save the patient the operation must be done before the third day. It is almost a rule that cases operated on before the third day recover, and those after the third day die. In my series there are but few exceptions to this. The duration of the condition is a far more important factor than the skill of the surgeon. Up to 1904 I had 14 cases with 11 deaths; since then 27 cases with no deaths. At first sight, I was much gratified to think how my skill had benefited by experience, but on closer analysis I saw that the real reason lay in the shorter duration of the symptoms prior to operation. In this field, as in most abdominal emergencies, it is the doctor who brings the surgeon to the patient within the first 24 hours who does the life saving. It would be interesting ground for discussion, as to how many hours the ordinary surgeon should wait for the extraordinary surgeon in such a case. I do not believe the difference between two surgeons is worth 12 hours, and as the time nears the fatal forty-eighth hour it goes faster and faster.

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*This paper was given before the Springfield Academy of Medicine on November 11, 1919, as an informal talk, and has since been written out for publication at the request of the Editor of the Boston Medical and Surgical Journal.

How tremendous, then, is the responsibility of the practitioner to detect, as early as possible, the first deciding symptoms which separate this critical condition from the ordinary belly-ache or attack of constipation. If the symptoms start with agonizing pain and collapse, as they often do in cases due to strangulation and obstruction to the blood supply of the gut, as in volvulus, intussusception and strangulated hernia, the diagnosis is easy; but when, as in the more common conditions of malignant strictures and bands of adhesions, the onset is only an exacerbation of symptoms to which the patient's intestines are already partially accustomed, how difficult is the task. It seems to me that we should make it a rule never to give a second cathartic or a second dose of morphine in a suspicious case, without consultation with a surgeon. I believe that any normal bowel will move satisfactorily in twelve hours, if six ounces of cotton-seed oil is put in the rectum, and three hours later an ounce of castor oil or other cathartic equivalent in potency, is given by mouth. At the end of twelve hours, if there has been no movement, a large suds enema will settle the question. It is unnecessary to repeat and waste further time. If the surgeon wants to try one more enema when he arrives, well and good. Do not give morphine until you have tried to move the bowels. If you do give morphine, don't repeat; if you have to, it is not an ordinary belly-ache.

Rectal examination must not be neglected in diagnosis. I do not mean instrumental, but digital examination. This procedure is so repulsive to both physician and patient, that it is readily passed by, like other disagreeable though essential things. It is all very well to have extensive knowledge of operative skill, but we must not underrate the simple, easy things. It is almost criminal to fail to make a rectal examination in any acute abdominal case before operation, and it is criminal where the suspicion of obstruction has arisen. By it we learn not only whether there is some actual palpable stricture or mechanical cause of stoppage, but the invaluable information of whether there are feces in the rectum or whether it is ballooned with gas. I have found that in real cases of obstruction the rectum is empty and the walls cling around one's finger, and there is a feeling above as if the whole abdomen was trying to crowd down into the pelvis. In other words, your finger tip feels the same intra-abdominal tension that your hand does on the outside of the abdomen. In appendicitis and other septic conditions the rectum is more apt to be ballooned with gas, for nature is on the defensive trying to wall off the pus, and to keep it out of the pelvis.

The books all mention fecal inpaction in the differential diagnosis. It seems to me time to stop doing this, for it leads to making the student think that fecal impaction is one of the common things, whereas in reality it is very rare. Feces do accumulate in the rectum and require digital removal, but I very rarely have seen any accumulation of feces above the rectum which was not readily dislodged by a single enema after the rectum had been cleared. I will not say that fecal impaction should not be considered in the diagnosis, but I do think it is of no practical importance after an enema or two. In fact, its existence is almost evidence of stricture of the intestine. Cases of cancer, for instance, in their early stages, cause no symptom except constipation, *i.e.*, fecal delay; then, alternating constipation and diarrhea, when putrefaction begins to soften the retained feces at intervals, so that they can pass through the stricture. Then the third stage, when the stricture is still tighter, the delay remains constant and a puddle of putrid feces stays above the stricture all the time. The gut above dilates and hypertrophies; semi-painful peristaltic rollers keep jets of fluid feces passing the narrows. This fluid may again partly absorb in the intestine below, so that partially formed movements deceive us as to the true condition. This sequence accounts for the great significance of constipation when it appears in elderly people of previously regular habit. Now that the x-ray is available we should seldom see the fourth stage, when the stricture becomes completely plugged.

The neglect of making a rectal examination once caused me more embarrassment than I ever have had from making one, although to insist on making these examinations in refined people is by no means unembarrassing. A case of obstruction was sent in to the hospital as an emergency and a tender tumor was found in the right groin. I examined the case rather hurriedly and considered it incarcerated omental hernia. At operation I found the tumor to be a mass of malignant glands, and on examining the rectum found cancer. The patient's physician, a very modest man, who had been present all the time, blandly remarked that it was for that condition that he referred the patient! Fortunately in this case no harm was done, but much as I believe in publicity in regard to safeguarding our profession, I should hesitate to analyze a series of cases of cancer of the rectum with regard to who was responsible for *not* making a rectal examination.

As to instrumental rectal examination, there are occasions when it should be employed, but as a rule in acute obstruction, the condition of patient and the time element render it of secondary importance. The same may be said of the x-ray. Where conditions justify its use it may give a detailed diagnosis, but the main diagnosis and time are the really important factors.

That it is possible for a practitioner to make early diagnoses I know, for Dr. F. S. Bulkeley of Ayer called me on three successive cases where the symptoms had existed less than 24 hours. All three recovered. That it is possible wholly to fail to recognize complete obstruction, I know from the following case of my own, which seems to me worth reporting in some detail. It made me realize the responsibility of the man who sees the case develop, and how difficult it is to appreciate that something is going wrong until it is too late.

The patient was a married woman of 31, the mother of two children. She complained of those vague abdominal symptoms which overworked, underfed multipari, with torn perineums, retroverted uteri and sagging intestines, so commonly tell us of. She made more than the usual complaint of "bloating something terrible." I removed a wholly obliterated appendix, excised a cyst the size of a walnut from each ovary, restored the uterus to its normal position by Webster's operation, and repaired the perineum. There was a varicocele of the pampiniform plexus and in putting a hemostat through the broad ligament to grasp the round ligament, I caused a considerable venous hemorrhage, so that in closing the wound, I felt it wise to leave two small cigarette drains to be removed in 24 hours, if no staining occurred.

The patient lived six days and we were not wise enough to operate again. The absence of classical signs of obstruction deceived us completely, and not until autopsy did I think of volvulus of the whole small intestine. This explained why there was no vomiting of any considerable quantity, and why the stomach tube persistently failed to get fluid from the stomach. No fluid could get up from the intestine into the stomach. Likewise it explained the persistence of small watery movements and practically no gas by rectum, for since there was nothing the matter with the large intestine, its fluid and mucus could come away by rectum. The twist was not tight enough to shut off the blood supply of the small intestine, and hence the signs of shock and septic absorption were absent. Even excessive distention was absent, because at the time the twist occurred the intestine was necessarily empty and there would be nothing to ferment to cause putrefaction. (I have long believed that there is in the intestine a self-regulating mechanism by which the blood supply can not only absorb gas from the intestine but can actually supply it to the intestine.)

The following notes were made after the autopsy eight years ago and seem to me instructive enough to be put on record: "Was called in afternoon after operation because Miss —— said that pulse was very bad and patient seemed in poor condition. I found it difficult to get pulse, especially in left wrist; but even in right it was hard to count and was small. Rate only 100, however. Nausea and vomiting and pallor. Looked like an extrauterine expression. Hands warm. I felt glad I had left in wicks because her condition was so much like hemorrhage. There was very little staining, however. She had a poor night but not much worse than many nervous women have the first night. Next morning I saw her again. She was unduly distended and tender in median part of abdomen. Not much staining and wicks were removed: only blood stained fluid followed them. Wound clean. From this time on, nausea and vomiting of very small amounts continued occasionally. In the afternoon I thought she was better but she did not look right. Tongue was moist practically up to the time of her death. Urine in fair amount after first 24 hours when she had to be catheterized. Leucocytes at one time 7,000, at another 9,000. Wound always drained too little for hemorrhage, and at one time after wick was removed there was a gush of clear serum. Movements were always liquid and unsatisfactory. Took practically nothing by mouth during the six days." I then made the following note. "On the whole, severe distention with nothing in stomach (by tube)and very little gas by rectum, low leucocyte count, clear tongue, clean wound, high small pulse,—should have meant volvulus of small intestine and nothing but volvulus. *In the presence of distention and no gas or fluid by stomach tube, operate.*"

I made an examination through the wound after death and these are my notes: "Abdomen distended, especially in median portion. Distention irregular as if composed of large coils crossing median line. Wound clean looking and wick not at all foul. No pus found in muscle layer. Wound enlarged upward and greatly distended coils of small intestine presented. These were withdrawn from pelvis and carried outside abdomen in search for a contracted coil. Pelvis easily emptied. No adhesions and very little blood-stained fluid in bottom of pelvis. No pus or fibrin.

When distended coils were outside of abdomen, and retracted upward, it could be seen that the rectum, sigmoid, cecum, and lower part of the ileum were contracted and empty. The contracted portion of the ileum disappeared upward toward the root of the mesentery. Holding the distended coils upward with my left hand, and passing my right hand upward along the contracted ileum, I came to a distinct twist in the region of the root of the mesentery. The intestines were then allowed to fall back and the wound enlarged upward to allow a better view. One of the distended coils was then picked up and followed upward (really downward), until the distended coil began to empty almost imperceptibly into the undistended one. This undid the twist which had not been tight enough to shut down the blood supply of its own pedicle. The distended coils were then emptied by passing a glass drinking tube from the lower part of the ileum upward (Monks), and the emptied intestine thus held out of the pelvis to allow examination of the other organs. With the exception of a little fluid in the transverse part of the duodenum, the stomach and duodenum were entirely empty and contracted, the stomach being so small it was almost hard to find it. The large intestine was entirely empty, except for a little gas and fluid in the cecum. The appendix stump was normal. The uterus was in ideal position and the ovaries, though a little soft and hemorrhagic, were not septic. The right broad ligament contained a small amount of diffuse hematoma, and the right tube was purplish with congestion. The distended coils of small intestine, although resembling those seen in the paralytic distention of general peritonitis, were shiney and not adherent with fibrin. No fibrin was seen at any time during the examination except over the spot where the round ligaments were sutured. Much of the small intestine occupied the region normally occupied by the stomach. These coils were especially distended and were probably proximal coils."

This case was a great lesson to me and I want to make a text of it. I was deceived because the stoppage was up as well as down. Such cases, where practically the whole small intestine is shut off at both ends, are rare, but I am sure that we are deceived in other cases in the same manner. I have seen cases where the large intestine continued to have unsatisfactory movements when the obstruction was in the small gut, and, *vice versa*, I have repeatedly seen cases where the obstruction was low in the large gut, have no vomiting at all, because there was plenty of room above the stricture to accommodate the feces for many days. The last patient I operated on had such an obstruction for two weeks without much vomiting. So beware of waiting for a diagnosis until all the four classical symptoms of obstruction appear, namely,—pain, vomiting, constipation, and distention. In the early stages (the operable stages) any or all of these signs may be absent. The amount of pain will depend on the character of the cause, *e.g.*, in the final obstruction of a cancerous stricture it may be practically absent, while in a volvulus acute enough to shut off the blood supply, it is agonizing. Distention will not occur early if the gut was empty when the obstruction took place, or it may be diminished by excessive vomiting. As I have said, beware of small stools from the large intestine making you think that all the trouble is over. Remember that obstruction in the small intestine from a band or volvulus may obstruct upwards as well as downwards, and prevent fecal vomiting. Nor can you rely on visible peristalsis, for it is seldom seen unless there is chronic obstruction. Fecal vomiting should not guide you, for the time to make a diagnosis is before it occurs. In fact, it is easier to say what not to rely on than the reverse. To my mind palpation of the abdomen is fully as important as anything. I suspect obstruction in any abdomen which is convex in outline when the patient lies on his back. Normally even a pot-bellied man, after a good dinner, if he lies on his back without contracting his abdominal muscles, will have a flat surface on the top of the abdomen. If there is obstruction, the outline will be uniformly convex. If the distention is not too great, one always can feel vaguely the distended coils—more by the variation of the feeling of intra-abdominal tension than by actual feeling of the coils themselves. The feeling of the obstructed belly is almost as characteristic as the spasm sensation in an inflamed belly, and worth any two other symptoms to me. Finally, before leaving the subject of diagnosis, never forget that renal colic and pancreatitis notoriously beguile us into the diagnosis of obstruction.

But you can look up these diagnostic symptoms in the articles by countless authorities, and I take it that what you want of me is some account of my own experience and the exceptions rather than the rules. My authority comes from an experience of 41 cases which I have operated on myself, from a considerable number seen as assistant to the late Dr. Harrington, and from numerous others followed at the Massachusetts General Hospital, which were operated on by my colleagues. In all I think that I have had intimate experience with fully 100 cases, excluding strangulated hernias, vicious circles after gastroenterostomy, and cancers and strictures of the rectum, all of which are really forms of acute intestinal obstruction and help to paint the clinical picture in the mind. My 41 cases I present in tabular form, and will take up the lessons learned from the most interesting of them; some of them will tax your credulity—the first certainly will.

In 1899 I operated on a colleague in a small western hotel, for a procrastinated case of obstruction due to an antecedent attack of appendicitis. The thickened appendix itself was the obstructing cause, and lay across the ileum like a dense band of scar tissue. This was the interesting point of the case from a pathological point of view, but the curious coincidence connected with it was more interesting. This man told me on his death bed that, some years before, when practicing in an isolated mining town, he had had an attack of appendicitis. There was no way of being operated on, so he stayed in bed, took morphine enough to keep comfortable, and let the abscess form. A "cake" developed and when the acute pain and tenderness passed away, although the "cake" was still present, he got up and began to attend to his practice. One evening while rounding a street corner he ran into two men fighting with knives, and was struck by one of them in the side. On going home he found that the stab had opened his abscess! You may attribute this story to the morphine, if you like, but I believed it. There was this to establish it. Over the appendix there was the scar of a stab wound, and in a little pocket of granulations, connected to the base of the appendix by a sinus, was a large, hard, calcareous appendolith.

Case 2 was the next case of interest. An abortion had been attempted with a rubber penholder some months previously. The penholder had not reappeared although it had done its work. An x-ray showed it. At operation it was found encapsulated among the intestines in the median line. There was no pus about it, and the sinus it left after removal was so firm and cicatricial that it felt stiff, as if the object was still there. I closed the little hole in the capsule which I had made to take out the penholder, with a single stitch, and then closed the abdomen without drainage. Everything went well until the patient was on the point of going home, when intense abdominal pain, vomiting, and distention set in. I procrastinated, and when I did operate, found the whole of the small intestine ~~chocolate-colored,~~ and even after the release of a band at the former site of the foreign body, the color did not fully return to the gut. Evidently the contracture of the sinus, formerly held rigid by the penholder itself, produced a strangulation of the gut or of its mesentery. I do not know whether this was a case of mesenteric thrombosis or of obstruction from a band. I think the former; perhaps both. I hardly know how to have prevented this, but I certainly should have operated sooner for the secondary condition.

(To be continued.)

SUPPORTING THE PELVIC FLOOR TO PREVENT AND OVERCOME UTERINE PROLAPSE.

By De Witt G. Wilcox, M.D., F.A.C.S., Boston,

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When a mother who has borne her quota of children passes the menopause and reaches comfortable middle life, she should by all rules of the game, be exempt from further pelvic discomfort. Unfortunately such is not always her lot, for there lies in wait for her that old time enemy, which seems not to have been young even in Caesar's time, "Falling of the Womb."

Permit me for a few minutes to direct your attention to the two phases of uterine or pelvic prolapse;

First, the so-called "falling of the womb," which comes on after middle life and which varies in degree from a slight prolapse to complete procidentia.

Second; the prolapse of the pelvic *floor* which follows the removal, either partial or complete, of the uterus, from whatsoever cause.

There are two types of women in whom uterine prolapse is exceedingly common, indeed it can be safely said that 75% of these types will have the lesion to a greater or less degree. First; those women of middle age or beyond, who have borne many children in rapid succession, who have had brief lying-in periods, who have borne the brunt of the family support, who have carried heavy weights, scrubbed floors, ironed, cooked and been upon their feet from 16 to 18 hours a day all their married life. If added to their burdens, they have suffered unrepaired perineal lacerations, the wonder is not that they so generally suffer from this distressing condition, but rather that any escape.

The second type are those who have had many or possibly only a *few* children, but whose circumstances have enabled them to have better parturient care; as they have grown older, however, and the family cares have decreased, and the comforts of living increased, they have become inactive, indolent, overfed, and eventually obese. This woman while she has a horror of getting fat is doing everything she can to increase her waist line, so she does the next worse thing, which is to tighten her corset lacings, in the hope that she may render her abdominal obesity less apparent.

Like the old saying, "what goes up must come down," it is equally true that if the abdominal and pelvic cavities are so compressed that there is not room for the organs which nature placed therein, they must of necessity come out. As intra-abdominal pressure is increased there is but one direction for the displaced organs to go, and that is downward. Hence these women ultimately develop uterine prolapse. For why should they not? It would require something more durable than normal ligaments to withstand such pressure.

These two types are the women who most frequently have uterine prolapse. Occasionally however, we find this condition in women who have borne but one or two children, and not infrequently do we find it in those who have borne no children at all, or ever married.

Permit me for a moment to refresh your memories on the means which nature has employed to support the uterus, and thereby prevent just such occurrences as uterine prolapse. Her ligaments are eight in number, three double sets, and two single. Each set has its own particular function to perform.

The round ligaments are designed especially to keep the uterus from falling backward. The broad ligaments maintain the uterus in the median line and steady it during gestation. The sacro-uterine ligaments are essential in supporting the pelvic floor and thereby prevent the uterus from taking the first steps in a prolapse. The function of these sacro-uterine ligaments are too frequently overlooked.

The picture which I exhibit will show you how the pelvic floor is made up and how it becomes possible for it to give way sufficiently to allow a uterine prolapse to occur.

By a little study it can be seen that a mere relaxing or giving way of the round and broad ligaments is not sufficient to allow a uterine prolapse to occur. There must first be a giving way on the part of the levator ani and sacro-uterine ligaments, before the uterus can begin to descend. The mere stretching of the broad and round ligaments would not cause a uterine prolapse. These ligaments are expected to stretch, else gestation could not proceed.

In detailing the treatment of this condition, I shall consider but one type of prolapse, and that the exaggerated type, generally called procidentia uteri, and but one class of patients, namely the woman who has passed the child-bearing period, or is approaching it.

Let us assume that this woman has had all the conservative treatments usually given such cases; tampons, pesseries, exercise, reduction of weight, postural treatments. Let us assume that she has had even more than conservative treatment, that she has had her lacerations skilfully repaired, that she has had her round ligaments shortened by any one of the dozen methods which are usually employed but which as frequently fail of permanent relief. That she has had a uterine suspension or a fixation or a Gilliam, Ferguson, *ad infinitum*, and yet she has her prolapse, because the essential element in the cause of the prolapse has been overlooked; namely the overstretched pelvic floor.

The great variety of operations proposed for the relief of this obstinate condition show how futile the majority of them are. I have gone through the gamut of them all, and while many of them will do fairly well for the mild cases, nearly all are eventual failures for the exaggerated type. Not until I employed the method I am about to describe have I been entirely and altogether satisfied with the end results obtained.

To attempt to support the pelvic floor by drawing up the uterus and fastening it by any device is like lifting a man by the hair of his head to keep him in the upright position, when his feet do not touch the ground. It is all right, so long as the hair holds out, but he would be much more comfortable to have something substantial under his feet, and thereby maintain his own position.

So in drawing up the uterus to support the pelvic floor, one is beginning at the wrong end.

The method I have been employing for the past four years is, first to make all necessary perineal repairs, paying special attention to the levator ani, then open the abdomen and remove the uterus at the level of the internal os.

In the majority of these cases the uterus is large, subinvoluted or fibrous, and in consequence over weighted; it is also very prone to a retro-displacement. Please bear in mind that I am now referring to such patients as have passed or are closely approaching the menopause, hence this abnormal uterus better be out. The sub total hysterectomy is made in the usual manner and the tubes and ovaries included in the removal.

The round and broad ligaments are tied separately; the ends of the ligatures left long and secured with hemostats; next the uterine arteries are secured, and lastly, particular care is taken to identify and secure the uterine ends of the sacro-uterine ligaments, as these are quite essential to the support of the pelvic floor, provided they have been severed in the amputation of the uterus.

After the uterus has been amputated at the level of the internal os, the stump of the cervix is pulled upward by bullet forceps, and four iodized or chromized cat gut sutures, number 2 or 3, are passed transversly and equi-distantly through the stump of the cervix, the ends of these sutures are secured with hemostats, and laid out in the order of their insertion.

The two ends of the severed broad ligaments are then drawn across the stump of the cervix and tied so that their severed ends approximate. The same thing is done with the ends of the round and sacro-uterine ligaments, or all six ligaments may be brought together, and tied with one ligature.

We now have all the pelvic supports which nature has provided for keeping the pelvic floor form sagging down, securely anchored at a point where they will be of greatest service. The four sutures which have been inserted through the stump of the cervix are now tied one by one. The tying of these sutures securely implants the three sets of ligaments into the stump of the cervix. This implantation accomplishes another end, in that it obliterates all raw stumps and surfaces.

There is usually a small exposed surface where the peritoneum has been dissected from the anterior surfaces of the uterus and bladder. This fold of peritoneum is picked up and stitched over the stump.

This is the method I have been using almost exclusively for the past four years, in overcoming uterine prolapse, and in preventing pelvic prolapse from occurring after hysterectomy. The results are so gratifying that I see little reason for changing it. The mortality, morbidity and end results, I shall speak of later.

What led me to adopt this method of operating on uterine prolapse, was an effort to prevent an oft occurring, undesirable end result of panhysterectomy, namely a sagging down or complete prolapse of the pelvic floor, occurring some months or years after a hysterectomy had been performed.

But few of our text books or operators lay any stress upon the necessity of supporting the pelvic floor after such an operation. After being convinced that the method as outlined did effectually prevent pelvic prolapse, following a hysterectomy, I adopted it for the cure of procidentia. The method is equally applicable in those cases where the *cervix* has been removed, with the uterus, a pan-hysterectomy. In such cases, the six ligaments can be inserted into the vaginal vault, after the same manner as inserting them into the stump of the cervix.

As to the statistics: Since adopting this method, I have operated upon 156 women in the manner just described; 63 have been pan-hysterectomies, without a single death; 93 have been sub total hysterectomies, with but one death, making a mortality of .7 of 1%.

The average time that these patients have remained in bed, has been 14 days, average time in the hospital, 20 days.

End Results: So far as I have been able to trace the patients, I have found but two patients who show any evidence of a prolapse. In such cases the failure has probably been due to the supporting ligaments pulling out from the cervical stump before healing.

In consulting so recent a publication as Johnson's Operative Therapeutics, I find the mortality given in that work for a period extending from 1913 to 1916, 428 cases of supra-vaginal or subtotal hystrectomy, with a mortality of 4.2%. Out of a total of 113 pan-hysterectomies, the mortality was 11, making a mortality for both methods of 7.5% which is more than 10 times the mortality resulting from the method described.

While this method requires a little more time than is required to remove a uterus, without thus implanting all the six ligaments, yet it need not be a prolonged operation. My average time for the last 56 cases was 50 minutes.

Clinical Department.

LOSS OF BOTH EYES FROM THE EXOPHTHALMOS OF HYPERTHYROIDISM.

BY FRANK H. LAHEY, M.D., BOSTON.

THE following case is cited as an illustration of the extent to which the exophthalmos of hyperthyroidism may progress.

Mrs. K., Hosp. No. 362034, was admitted to the Ophthalmological Service of the Boston City Hospital on October 19, 1917, with a past history of admission as an out-patient to another hospital on November 21, 1916, where she had been treated for hyperthyroidism by means of x-rays. She had received the x-ray on December 22, 1916, January 11, January 31, March 8, March 29, April 21, May 12, and June 2, 1917. She stated that following x-ray treatment, her pulse came down, she gained in weight, and her general condition improved, but that her exophthalmos continued to progress until oedema and ulceration of her right cornea was such that she came to the Boston City Hospital, was admitted to the Ophthalmological Service, and enucleation of the eye was done by that service. On November 16, I was asked to see her on account of increasing exophthalmos and oedema of the left eye, and it was decided to attempt by surgical measures to preserve her remaining eye.

Because of the belief that recession of the protruding eye occurs after removal of the sympathetic ganglion on the affected side, the operation of removal of the superior cervical sympathetic ganglion was carried out, without difficulty, and at the same time the external canthus was incised to relieve the pressure of the lid edges. Progress of the oedema continued in spite of these procedures, whereupon two days later the lids were sutured together by the Ophthalmological Service, and still oedema and ulceration continued until enucleation of the remaining eye became necessary, and was carried out by the Ophthalmological Service on December 26, 1917.

On my return to practice this year, I had this patient interviewed at her home, with the following report:

Blind, but cheerful. Pulse 128. No visible or palpable thyroid enlargement. Well-marked tremor. No loss or gain in weight. Appetite normal. Dyspnoea on exertion, but no worse than before operation. Thinks that she is rather more nervous than before operation. Her husband states that she is steadily improving, but "she moves her fingers constantly."

This condition is one of the rare complications of hyperthyroidism, and certainly a most distressing one. Were such a case to occur again, I would certainly employ removal of the sympathetic ganglia, and at a much earlier stage of the disease; furthermore, while I am sure that x-ray treatment in no way caused the condition, I would employ surgical removal of a considerable portion of the gland, rather than x-ray treatment, as the relief from hyperthyroidism (of which the exophthalmos is a part) is more complete and immediate after the surgical procedure than that which follows x-ray treatment.

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Medical Progress.

A RÉSUMÉ OF THE LITERATURE OF INFANTILE SCURVY DURING THE PAST TWO YEARS

By John Lovett Morse, A.M., M.D., Boston.

In a paper published in the Boston Medical and Surgical Journal in January, 1918, Vol. 178, page 160, the writer summed up the literature regarding infantile scurvy for the previous five years. Much work has been done and much has been written regarding this subject since that time in the literature of the Allies. Presumably there has also been a considerable amount written on it in the literature of the Central Powers. This material is not, as yet, available, however, and has, therefore, not been considered.

Early in 1918, McCollum,[1] in an article in the *Journal of the American Medical Association*, summed up and restated his views regarding the etiology of scurvy, *viz.*, that it is not due to the lack of an antiscorbutic substance in the food, but to the absorption of the abnormal decomposition products of proteins. He attributes scurvy in guinea pigs to stagnation of the feces in the cecum and the absorption of the toxic products of the abnormal decomposition of the food resulting from it. He cites the results of the laxative treatment of scurvy in these animals and believes that because rats do not develop scurvy on a diet which produces scurvy in guinea pigs, it is proven that scurvy is not due to the lack of an antiscorbutic element in the food. He says that if scurvy was due to such a lack, it must be assumed that the guinea pig requires some chemical complex in the food which the rat does not. He thinks that this is not reasonable, because the experimental evidence points to the conclusion that the chemical requirements of one species of the higher animals are the same as those of another. He finally says that "whoever would seek to establish the validity of the existence of a specific antiscorbutic substance should first furnish new explanations for the experimental results that are not in harmony with the antiscorbutic theory, rather than present new experiments that harmonize with this most attractive hypothesis."

Jackson[2] has endeavored to corroborate her former work in connection with Moore as to the action of microörganisms in the etiology of scurvy. She found microörganisms in the bones of two babies with rickets that died of other diseases and also in those of a baby dead three hours after birth. In the writer's opinion, however, there is no evidence to show that the cocci which were found had anything to do with the diseases or with the bones, except as late and secondary invaders.

She also describes a similar condition in five puppies. These lesions seem to the writer rachitic rather than scorbutic and, as in the case of the babies, there is nothing to show that the organisms were more than secondary invaders. She finally describes hemorrhages in the bones of a guinea pig, which she believes to be scorbutic. She did not find, however, any cocci. In summing up she says "while we cannot as yet state positively that the lesions described are due directly to the action of the micrococci so frequently found in connection with the lesions, and particularly the fresh ones, the presence of cocci appears at least significant. Even should we subsequently decide that these organisms are but secondary invaders it still seems that the evidence presented by microscopic preparations of the lesions argues for the presence of some infectious agent, and emphasizes the need of further work on the bacteriology of these conditions."

Harden and Zilva[3] criticise McCollum and Pitz and believe that their conclusions are unwarranted, because they gave their experimental animals whole milk freely. They state that it is well known that if enough milk is taken scurvy does not develop, and, as the amounts of milk which the animals took were not noted, the results of McCollum and Pitz are, therefore, unreliable. The improvement in the animals was probably due, in their opinion, to the milk which they took. They also say that "as long as these observers (McCollum and Pitz), continue to employ their present technique, we consider that their results are open to criticism."

Cohen and Mendel[4] carried out a very careful and complete investigation with regard to the relation of constipation to scurvy in guinea pigs. In more than 100 autopsies on normal guinea pigs or on guinea pigs dead from other conditions than scurvy they never observed one in which the cecum was not full or partly full of semifluid feces. The cecum varied widely in appearance and in the character of its contents in scorbutic animals. They found impaction of feces in the cecum about one-quarter of nearly 100 guinea pigs dead of scurvy. They found visible damage to the intestinal wall in about one-half. They call attention to the fact that milk is an extremely constipating diet for guinea pigs and that too much milk may cause death from constipation. They found that guinea pigs developed scurvy on small amounts of milk, but got over the scurvy when they took larger amounts, proving that constipation was not the cause of the scurvy. Adding roughage to the diet did not prevent scurvy, even when the bowels were kept well open. Givens and Cohen[12] call attention to the fact that small amounts of cabbage which, when fresh, prevent scurvy, have no action after being dried, although they contain the same amount of roughage. Cohen and Mendel conclude, therefore, that the simultaneous exhibition of constipation and a certain symptom complex with a given diet is no *prima facie* evidence that constipation is responsible for the appearance of the symptom complex. They may well be intercurrent conditions. They call attention to the fact that Pitz' guinea pigs were given milk *ad libitum*, and further call attention to the fact that scurvy also develops in guinea pigs on markedly laxative diets.

Hess and Unger[5] also call attention to the fact that macroscopic lesions do not justify the diagnosis of scurvy in guinea pigs, because the macroscopic lesions in scurvy and rickets may be very similar. Microscopic examinations must be done before authoritative statements can be made. On this account the work of McCollom and his school, as well as that of those who criticise it, are open to a certain amount of question. Hess and Unger[5] found that cod liver oil prevented constipation in guinea pigs but did not prevent scurvy. They also gave liquid petrolatum to a large number of guinea pigs and kept the bowels loose, but scurvy developed just the same.

Rappleye[6] fed guinea pigs on a diet of oats and milk. The amount of milk which they took is not stated, however, and no microscopic examinations were made. The guinea pigs developed scurvy and their ceca were distended with pale pasty feces. They were improved, but not cured, when phenolphthalein was given. Guinea pigs which were fed on oats and hay also developed scurvy. In them, however, the appearance of the intestines was nearly normal. Putrefaction was less marked and the stools were not abnormal. Laxatives, however, helped these animals also. He concludes, therefore, that it is evident that scurvy in guinea pigs is not due to the impaction of feces and its results as McCollum claimed. Blood cultures made from animals dying or killed during the study were universally sterile. His results, of course, as far as they go, disprove the suppositions of Jackson.

Chick, Hume and Skelton[7] also criticise the conclusions of McCollom and Pitz in that they paid no attention to the amount of milk taken in drawing their conclusions that scurvy was not a deficiency disease, but due to toxemia from constipation. Chick and her coworkers show that those of their animals which survived took much more milk and but little grain and that those that did not, took much grain and little milk. They say that all guinea pigs with scurvy are constipated, no matter what the diet. They say that the improvement which was supposed by McCollom and Pitz to have followed as the result of giving laxatives might just as well have been due to the taking of more milk. Chick and her coworkers gave considerable amounts of dried vegetables, which had been well cooked in water in order to restore their bulk. They did not prevent scurvy, showing that when scurvy develops on a diet of dried vegetables, it is not the lack of bulk in the dried vegetables which by causing constipation is the cause of scurvy. Further experiments with liquid paraffin showed that when this was given with the usual diet it did not prevent scurvy, and that when it was added to the diet after the development of scurvy it did not influence its course.

Hess[8] states that the observation of many cases of infantile scurvy has convinced him that constipation plays no essential rôle in the etiology of this disease. Furthermore, potato, which cures scurvy, is not a laxative, and the malt soup preparations, which most readily lead to this disorder, are laxative. Infantile scurvy is not relieved by petrolatum, while it is cured by amounts of orange juice so small that they have no laxative action. Furthermore, he found that the "artificial orange juice" which McCollom found effective in scurvy in guinea pigs was ineffective in infantile scurvy. Hess and Unger[9] also found that orange juice given intravenously was as effective in the cure of infantile scurvy as when given by the mouth. Given in this way, orange juice can, of course, have no laxative action.

Pitz,[10] taking his cue from Hull and Rettger[11] who showed that in white rats and men the bacterial flora of the intestine could be changed from a putrefactive to an acidophilus flora by the addition of lactose to the diet, argued that, on the basis that scurvy in guinea pigs is due to stagnation of feces in the cecum with putrefaction and absorption of the products, any substance which will improve or change the intestinal flora from a putrefactive to an acidophilus type, should prevent scurvy. He, therefore, fed guinea pigs on oatmeal and whole milk to which he added a carbohydrate. He believes that he was able both to cure and prevent scurvy in guinea pigs by the addition of lactose to the diet. Dextrin, sucrose and starch had some protective action, but dextrose very little. All of them had much less action than lactose. His conclusions are open to criticism, however, because whole milk was given to the guinea pigs *ad libitum* and no data are given as to the amounts which they took.

Cohen and Mendel[4] found that the addition of pure lactose to the food given to guinea pigs neither prevented the development of scurvy nor cured it after it had developed. They call attention to the facts that Pitz' lactose may not have been pure and that he gave milk to the guinea pigs *ad libitum*.

Harden and Zilva[3] also criticise Pitz' results because he gave his guinea pigs raw milk freely. They had previously tested cane sugar, fructose and a syrup, and found that they had no antiscorbutic value. They then tested lactose and found that in doses of from 3 grams to 6 grams daily it did not afford any protection against scurvy in guinea pigs. They, therefore, believe that Pitz' results were due to raw milk rather than sugar. Harden and Zilva[13] also showed that the antiscorbutic value of orange juice and lemon juice is not in the part made up of citric and other acids, nor connected with either sodium or potassium, as McCollom and Pitz supposed.

Hess[8] writes that "unless the diet of man includes food possessing the antiscorbutic property, scurvy will develop in due course of time. From this point of view, scurvy must be regarded as a deficiency disease. If, however, we would limit this term to diseases brought about by a deficiency of a definite chemical or biologic substance, then we are not at the present time warranted in thus classifying it. Nor is it necessarily true that scurvy is directly brought about by a lack of this accessory food factor. It is quite probable, ..., that the lack of this factor leads rather to the development of substances which in themselves occasion the symptoms of the disease." Hess and Unger[5] state that the addition of hard boiled egg and cod liver oil to the diet of guinea pigs did not prevent scurvy, that is, scurvy developed on a diet containing the "fat-soluble A." Furthermore, a diet of hay or straw with oats and water causes scurvy in guinea pigs, although this diet contains a sufficient amount of the water-soluble vitamins. Cohen and Mendel[4] found that the addition of neither yeast nor butter to a diet causing scurvy in guinea pigs prevented its development, showing that neither the fat-soluble nor the water-soluble vitamins are the primary factors concerned in the scurvy of the guinea pig.

Gerstenberger[14] in a long theoretical article "imagines" that scurvy may be due to a partial defunctioning of calcium and its physiological anion as the result of a break in the metabolism of carbohydrates from the absence or inactivity of some physiochemical substance or "vitamin" essential to normal carbohydrate metabolism. The defunctioning substance produced as the result of the break in the metabolism of the carbohydrates may possibly be oxalic acid or some other agent having a similarly strong affinity for calcium. He then proceeds to defend his imaginings and to endeavor to prove them from the literature. His efforts do not, however, seem to the writer very successful.

Pitz[15] was inspired by Gerstenberger's article to make some experiments as to the influence of meats and various salts upon the development of scurvy. He made no microscopic examinations, however, and gave his guinea pigs raw milk *ad* *libitum*. He found that the addition of meat or casein to the diet would prevent scurvy for a number of weeks and greatly prolong the life of the animals. The addition of tricalcium phosphate to the protein increased the protection and the addition of sodium chloride still further increased it. Experiments with the various forms of calcium and of phosphorus then showed that the calcium was more important than the phosphorus, and that the best combination was tricalcium phosphate. He explains the action of the calcium as follows: Calcium controls the permeability of various animal tissues and thereby affords protection against invading agents. He thus fits in his new data with his old theories.

Chick, Hume and Skelton[7] found that from 30 c.c. to 50 c.c. of fresh cow's milk daily did not prevent the development of scurvy in guinea pigs on a diet causing scurvy. They found that exactly 50 c.c. daily afforded some degree of protection, that from 50 c.c. to 85 c.c. daily increased the protection and that from 100 c.c. to 150 c.c. daily afforded complete protection. They conclude, therefore, that it is the quantity of milk which counts. They believe that fresh cow's milk contains an antiscorbutic accessory substance, but only in small amounts. Milk to protect, therefore, must make up the whole or almost the whole of the diet. This is usually the case with young animals. The antiscorbutic value of fresh milk is, therefore, very low. Their results as to the small amount of antiscorbutic substance in fresh milk have been generally accepted. Hess and Unger[9] estimate that an infant needs at least one pint of raw milk daily to protect it against the development of scurvy.

Barnes and Hume[16] have made a comparative study of the antiscorbutic properties of both heated and dried cow's milk. They found that from 100 c.c. to 150 c.c. of raw milk is required daily to prevent scurvy in guinea pigs on a basal diet. These amounts of dried milk always failed to prevent the development of the disease; 125 c.c. to 175 c.c. of raw milk daily were required to prevent scurvy in monkeys, while 250 c.c. to 300 c.c. of dried milk daily were necessary certainly to prevent the development of scurvy in these animals. A monkey acquired scurvy on 175 c.c. of dried milk daily and was cured completely on 175 c.c. of fresh milk. Scalded milk, that is milk brought rapidly to a boil in a saucepan over a gas burner, and then immediately set to cool, had more antiscorbutic value; 200 c.c. daily of scalded milk quickly cured scurvy in a monkey which had been taking 200 c.c. and later 300 c.c. of dried milk. Certain experiments which they made seemed to show that the antiscorbutic value of cow's milk varies with the feeding of the cows. Winter milk is inferior to summer milk. Chick, Hume and Skelton[7] also found that in guinea pigs dried milk had less protective power than fresh milk. They say that any method of preparation which tends to diminish the small amount of antiscorbutic element in fresh cow's milk must be regarded with suspicion when feeding infants. Hess and Unger,[9] using a milk dried at 116° C. for one minute, found that an amount equal to 80 c.c. of fresh milk cured scurvy in a guinea pig. Two babies with scurvy also improved when given this dried milk.

The curative value of lemon juice and orange juice, both in experimental and human scurvy, is universally accepted. The "artificial orange juice" prepared by McCollom and which he found effective in guinea pigs has been found by Hess[8] to be ineffective in both guinea pigs and infants. Harden and Zilva[13] fractioned lemon juice and found that the best part, if not the whole, of the antiscorbutic content of lemons is in the part not made up of citric and other organic acids. They found that the potency of their "treated" lemon juice diminished with time and that the subcutaneous injection of treated lemon juice did not cure scurvy. Neither did the administration of very concentrated doses of "treated" lemon juice prevent or delay the onset of scurvy in guinea pigs when they were put on a diet lacking the antiscorbutic factor.

Harden, Zilva and Still[17] believe that the main part, if not the entire antiscorbutic potency of the lemon juice, is contained in the residue which is left after the removal of the free citric and other acids. This residue is slightly acid to litmus but can be made neutral without vitiating its potency. It can be concentrated to any desired volume, or even evaporated to dryness without losing its potency. They think that this fact may be of advantage in that intestinal disturbances and diarrhea may be avoided by its use. They were able in this way to give the equivalent of from 6 to 12 lemons daily without disturbing the digestion or causing diarrhea. They feel, therefore, that with this preparation quicker results may be obtained than with plain lemon juice. Hess and Unger[18] found that ageing and heating had practically no effect on the antiscorbutic power of orange juice. They were able to extract the active factor of orange juice with alcohol and retain the power of the orange juice. The residue was inert. They also found that orange peel retains some of its antiscorbutic power after drying for three months.

Harden and Zilva[19] and Harden[20] found that the neutralization of orange juice did not destroy its antiscorbutic power. When, however, orange juice was made N/20 alkaline with NaOH and stored for twenty-four hours in a cold room, amounts which protected guinea pigs when untreated did not prevent or delay the onset of scurvy. They proved that this defect was not due to the effect of the alkali on the animals, because when N/20 alkaline orange juice, after having been stored for twenty-four hours, was made N/20 acid with HCl before being given to the animals, the effect still persisted. An alkalinity of N/50 with NaOH destroyed all but a trace of the antiscorbutic activity.

Givens and McClugage[21] used two preparations of dried orange juice. One was dried instantaneously in the same way as milk is dried to form milk powder, the other was dried slowly for 50 hours. An equivalent of 3 c.c. of fresh orange juice of the rapidly prepared preparation prevented the development of scurvy in guinea pigs. The same dosage also cured them after scurvy had developed; 12.5 c.c. of the other preparation was necessary to prevent or cure scurvy in guinea pigs. Neither preparation was injured by ageing for three months.

Hess and Unger[9] were able to cure scurvy in infants by the use of orange juice intravenously. The strained orange juice was boiled for five minutes and just before being injected was rendered neutral, or slightly alkaline, by the addition of normal sodium hydroxid. They used as much as 30 c.c. for an injection. The orange juice used in this way was as effective as when it was given by the mouth.

Chick, Hume and Skelton[22] found that preserved lime juice was useless for the prevention of scurvy in guinea pigs and monkeys. They found that, volume for volume, fresh lemon juice was four times as potent in the prevention of scurvy as fresh lime juice. In one instance, the scurvy which had developed on lime juice was cured by the same amount of lemon juice. They explain the favorable results which have been reported from the use of lime juice in the past to the fact that lemons were used instead of limes, the two having been confused in the past. Stefánsson[30] found that bottled lime juice neither prevented nor cured scurvy among his men.

Chick and Rhodes[23] investigated the antiscorbutic value of the raw juices of root vegetables, using guinea pigs on a basal diet. The juices were prepared by rubbing the clean cut surfaces of vegetables on a kitchen grater, placing the pulp in muslin and squeezing gently between the fingers. The juices were prepared fresh daily. They changed rapidly at room temperature and deteriorated in antiscorbutic value even when kept in the refrigerator at low temperatures. They found that the juice of raw swede was easily first in antiscorbutic value; 2.5 c.c. daily protected the guinea pigs from scurvy. Guinea pigs receiving from 5 c.c. to 10 c.c. of raw carrot juice daily developed severe scurvy, while those receiving 20 c.c. daily were protected; 20 c.c. of beet juice daily afforded no protection. They state that the value of raw swede juice is not markedly inferior to that of orange juice and that it is a satisfactory substitute for it. The value of raw swede juice is ten times that of carrot juice and more than ten times that of beet juice. Incidentally they found that 1.5 c.c. of fresh orange juice protected 50% of guinea pigs against scurvy, while 3 c.c. of fresh orange juice protected all the pigs against scurvy.

Delf[24] proved that 1.5 grams of raw cabbage added to the basal diet of guinea pigs prevented scurvy and that 0.5 grams daily did not. Chick and Rhodes[20] found that 0.5 grams of raw cabbage leaves protected a little and that 1.5 grams of raw cabbage leaves protected entirely. Givens and Cohen[12] found that raw cabbage prevents and cures scurvy. Campbell and Chick[25] found that 5 grams of canned cabbage daily did not protect guinea pigs against scurvy, while 7.5 grams of canned cabbage daily prevented scurvy entirely. The loss of antiscorbutic value during canning was, therefore, about 70%. Givens and Cohen[12] found that cabbage dried at low temperature retained some, but not all, of its antiscorbutic qualities. So also did Givens and McClugage.[26] When dried at high temperatures and when cooked and dried, cabbage lost all of its antiscorbutic properties. Cohen and

Mendel[4] found that dried cabbage in amounts of from one to three grams daily apparently had a definite antiscorbutic action. Hess and Unger,[18] as well as many others, have found that fresh carrots are strongly antiscorbutic. They found, however, that carrots dried in three different ways were all inert.

Although Hess has shown that boiled potatoes have a strong antiscorbutic action in babies, Givens and Cohen[12] found experimentally that potatoes when boiled and dried lost all of their antiscorbutic power. Stefánsson[30] found that desiccated potatoes neither prevented nor cured scurvy.

Campbell and Chick[25] found that 5 grams daily was the minimum amount of raw beans which would prevent scurvy. After canning, 20 grams did not prevent the development of severe scurvy. That is, the loss of antiscurvy value was between 75% and 90%. They conclude from their experiments with beans and cabbage that the value of canned vegetables as regards antiscurvy properties must be regarded as negligible.

Hess and Unger[9] strained canned tomatoes through a colander, warmed them and fed them to babies through a nursing bottle, giving one ounce daily to infants a few months old. In some instances they gave as much as 8 ounces daily without causing any disturbance. In no instance did they have either intestinal or nutritional disturbances from the tomatoes. These, they say, ought not to be expected, as the acidity of tomatoes is only one-half of that of orange juice. They gave the tomatoes to a large number of infants in an institution for nearly a year and found that it was as effective in the prevention of scurvy as orange juice. Ageing one year did not impair its value. Stefánsson[30] found that canned tomatoes neither prevented nor cured scurvy among his men. Givens and McClugage[26] found that tomatoes dried under certain conditions retained some of their antiscorbutic properties.

Hess and Unger[9, 18] found that prune juice has no antiscorbutic action either in babies or guinea pigs.

Hess and Unger[9] found that bananas were ineffective in two cases of scurvy, while Chick and Rhodes[23] found that green Spanish grapes had very little antiscorbutic value, even when given in considerable amounts. Cohen and Mendel[4] found that both germinating oats and barley prevented the development of scurvy in guinea pigs.

Harden and Zilva[27] have shown by their experiments on monkeys that the antineuritic and antiscorbutic elements are independent. They produced scurvy in a monkey on an ample diet in which the antineuritic element was present, but in which there was no antiscorbutic element. They also produced scurvy in a monkey on an ample diet containing neither the antineuritic nor the antiscorbutic element. Finally they produced scurvy in a monkey on an ample diet containing the antineuritic element but no antiscorbutic element and then cured it quickly by giving their "treated" orange juice.

Hess and Unger[28] call attention to the fact that the alkalization of orange juice destroys its power to protect guinea pigs against scurvy. It is evident, therefore, they say, that the antiscorbutic vitamin is peculiarly sensitive to alkalization. It would seem to be, therefore, not immaterial as to whether the foods of infants are alkaline or not. They have found that milk formulas containing malt soup have an exceptional tendency to bring about scurvy in infants. This action might be due, they say, to a number of conditions. (1) An insufficient amount of milk; (2) pasteurization, boiling or both; (3) ageing of the milk; (4) the alkali in the malt soup; (5) the large amount of carbohydrate in the food. In order to determine which of these possibilities was the cause, they gave to a baby which had developed scurvy on a malt soup mixture a pint of milk with sucrose and the same amount of potassium carbonate as was in the malt soup instead of flour and malt soup. The milk was boiled five minutes. The scurvy remained the same. They then gave the same mixture of milk and sucrose, boiled as before, but without the potassium carbonate. The scurvy was immediately cured. The alkali, therefore, evidently rendered the antiscorbutic factor in the pint of milk insufficient. They then experimented with guinea pigs and found that when potassium carbonate was added to the amount of milk ordinarily sufficient to prevent the development of scurvy in guinea pigs, scurvy developed. The scurvy was then cured by the administration of orange juice, although the alkali was still added to the food. It is evident, therefore, that the scurvy was not due directly to the alkali but to the action of alkali on the antiscorbutic factor in the milk.

Hess[29] reports a case of scurvy in a baby of 18 months in which focal degeneration was found in the lumbar cord. The process was degenerative, not inflammatory. He does not know whether the degeneration was due to the scurvy or was an accidental association and reports the case simply to stimulate further investigation.

Stefánsson[30] found that the men of the Canadian Arctic Expedition during the winter of 1916-1917 at Melville Island, who had scurvy, had a marked craving for salt. He thinks that salt may play a part in the causation of scurvy. He found that raw meat was the best preventative and cure for scurvy. Cooked fresh meat will probably prevent scurvy, but it is not nearly as effective in the treatment as raw meat. He found that slight putrefaction did not interfere with the antiscorbutic action of raw meat and fish. He also found that there was no relation between bodily cleanliness, ventilation and scurvy. Furthermore, exercise did not prevent scurvy.

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Book Review.

Prothèse et Chirurgie: Cranio-Maxillo-Faciale. Par J. LEBEDINSKY, Dentiste des Hôpitaux de Paris; Chef du cendre de Prothèse maxillo-faciale de la IV° région; et M. VIRENQUE, Ançien interne Médaille d'or des Hôpitaux de Paris Chirurgien de Place au Mans. Préface de M. le Dr. H. DELANGENIÈRE, Chirurgien des Hôpitaux du Mans; Chirurgien chef du 2° secteur chirurgical du Mans. 154 Planches comprenant 421 Figures. Paris. Librairie J. B. Bailliere et Fils; 19, Rue Hautefeuille. 1918. Tous droits réservés.

The first view of this paper covered volume of 400 pages produces in the mind of the average American physician certain sensations which may fairly be described as emotions; if he has studied abroad, the reader's thoughts immediately fly backwards ten, twenty or thirty years, to scenes now half forgotten, to various foreign cities, to clinics in which the English language is seldom heard, and to medical books, always of paper and unbound: here is one of those familiar books; the same large clear type, wide margins, flat surface; an easily opened volume, and one which stays open; the same modest but perfect pictures, the same curious placing of index at the end, and the same light weight, even of a good sized volume. Americans pride themselves upon being a practical people, but we are infinitely less "practical" than the French in many things, and conspicuously so in the matter of text-books.

Another "emotion" will strike the reader of this particular volume, and a question—how is it possible that as a nation we have been from 1870 to 1915 so completely hypnotized by German, to the practical exclusion of French medical literature? Here is a book that is superlative in its own way: a French surgeon and two surgeon dentists, experts in prosthesis, have written it in conjunction: wounds of the head, jaws and face are considered, as they should be, together: the ingenuity, care and resource here testified to, are superb; the results almost beyond belief. Not all French artists are painters; some are physicians and surgeons.

The book covers: Wounds of the Head and Neck; of the Salivary Glands; of the Nerves; Fracture of the Jaws; Occlusion of the Jaws; Cranioplastics for loss of soft parts of bones.

The volume deserves careful study by all good surgeons.

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THE PHYSICIAN'S RESPONSIBILITY FOR NARCOTIC DRUGS ISSUED BY NURSES.

Because the Internal Revenue office regards nurses as agents of physicians or institutions under whose supervision or direction their duties are performed, the Federal authorities also hold these physicians or institutions responsible for all narcotic drugs issued through nurses and demand strict accountability on official records of such drugs dispensed and the amount returned from nurses as unused.

These methods for accountability provide the authorities with an ample check on the traffic in narcotic drugs and enable inspectors to determine readily any excessive distribution which may result in abuses of the law.

The reason for holding practitioners and institutions responsible for the drugs issued to nurses is due in a great measure to the fact that nurses are not permitted to register or to be in possession of narcotic drugs or preparations except as agents of consumers. The issuance of narcotic drugs to nurses as consumers will be subject, of course, to the same limitations as in the case of any other consumers.

When there are issued to nurses, as agents, drugs to be administered to patients it is incumbent upon the practitioner or the institution to see that upon the discharge of the nurse from the case all unused drugs are returned and proper accounting made upon the records. Any such narcotic drugs found in the possession of a nurse not at the time under the supervision of a practitioner shall be forfeited to the government.

If a physician has more than one office, as is frequently the case, separate registration must be made for each location and each office is given an official order number. Should such a physician be called to prescribe narcotic drugs at a place away from either office he should use the official number assigned to the principal office.

In taking drugs from one place to another the Internal Revenue office insists upon the official forms being used to make a record of the transaction in order that inspectors may follow the disposition of the stock; otherwise the records would show a discrepancy.

THE NEED OF LABORATORIES FOR DIAGNOSTIC PURPOSES.

The successful practitioner of medicine is he who can make an accurate diagnosis. Without it all treatment must be but guess work.

Our medical textbooks give long lists of symptoms more or less in the shape of a catalogue and from them the student is to picture to himself disease. The time is long past when this method can bring relief to the sufferer or credit to the physician. In these days we must replace the catalogue of symptoms by accurate knowledge of how the various organs of the body are functionating. In other words, the diagnosis must be based upon laboratory findings and bedside observations of instruments of precision. These must be interpreted by men who have made especial study of the physiology of certain organs, both in normal and in diseased conditions. The ordinary practitioner cannot hope to master accurately all of the specialties of medicine. This being the case, we shall see that in the near future physicians will form closer associations among themselves for the purpose of diagnosing more accurately the cases that come before them. They must have at their command, therefore, a working laboratory.

In the smaller communities it will be some time before the laboratory facilities are developed adequately; but there is no reason why the older practitioner should not associate with him a younger man, who can do the necessary laboratory work, thus bringing to his patients a better diagnosis with a corresponding improvement in the health of the community. It is to be hoped that in time, when the public appreciates the value of health, we shall see developed local laboratories as a part of the public health administration of the State. These laboratories could do not only the usual public health work, but could serve as diagnostic laboratories at the service of all physicians.

THE LEGAL DEFENCE OF PHYSICIANS.

At the recent trial of a damage suit against a Boston physician, defended by the Massachusetts Medical Society, the judge made a decision important not only to the defendant but to all surgeons. He heard only the plaintiff's side of the case, which included all the doctors who knew the case, as well as the defendant himself. At this stage of the case the judge said in effect: "All the doctors in this case agree as to the facts and in opinions. You, therefore, have no question as to facts to present to the jury. Such differences as there are in opinion are concerning surgical technique and these matters are not for any lay jury to pass upon. I therefore close the case and direct the jury to bring a verdict for the defendant."

This decision indicates a line of defense against the present epidemic of suits against members of our professon. If the professional experts on both sides, in open, fair discussion of the case before the trial, find they honestly can agree on certain facts, those facts, at least, and the agreement upon them, can be brought out clearly at the trial. Such differences of opinion as are discovered, if found to be purely technical, will never reach a jury. A few such court decisions would tend to discourage "contingent" lawyers, would check the blackmailing class of plaintiffs, and would leave to be attacked only those surgeons who are not giving due skill and ordinary care.

POSTAL PRIVILEGES OF THE PHYSICIAN.

Some time ago we called attention to a practical way in which the Federal Government could assist the local health administrators without the expenditure of any considerable amount of money. We suggested that the same mailing privileges be granted the health official that are now granted the experiment stations.

For a time the Wassermann tubes sent through the mail were sent free, but now we have the following letter from the Public Health Service which takes away that privilege:

"Penalty envelopes or labels may not, therefore, be furnished to private individuals to transmit in mail, without payment of postage, specimens for diagnosis or any other matter except written or printed official information and indorsement."

This decision will add greatly to the cost of the supervision of the venereal diseases. Although we can have almost any privilege extended to the farmer for the benefit of his cattle, when it comes to saving the life of a baby or a child who has inherited syphilis, or a young person who may have been infected innocently, it appears that the physician must pay all the expenses.

MEDICAL NOTES.

Major General William C. Gorgas in Peru.—Major General William C. Gorgas, former surgeon general of the United States Army, sailed for Lima, Peru, on April 1, to visit Belgium and West Africa. He will devote the next five years to directing the sanitation work of the Peruvian Government. He will return to Peru in January, 1921. During his absence, Colonel Wrightson will remain in charge of the work.

Epidemic of Measles in Rowe.—There is an epidemic of measles spreading through Rowe, Massachusetts, and more than fifty cases, among both adults and children, were reported on April 9. The schools and churches have been closed temporarily. The disease is appearing in an unusually severe form.

Boston Delegates at Meeting of Nursing Associations.—Attending the first biennial meeting of the American Nurses' Association, the National League for Nursing Education, and the National Organization for Public Health Nursing were Miss Gertrude W. Peabody and Mrs. Robert L. DeNormandie, vice-presidents of the Instructive District Nursing Association; Miss Mary Beard, director, and Miss Grace O'Bryan, associate-director, and a group of nurses, who left Boston on April 7. The meeting was held in Atlanta, Georgia, from April 12 to 17.

On April 9 and 10, the National Organization of Public Health Nursing held a special session, during which sections were formed, within the organization, of child welfare and industrial and school nursing. This year, for the first time, laymen were admitted to the directorate of this national organization. Miss Gertrude W. Peabody of Boston and Dr. C. E.-A. Winslow of Yale were nominated for the office of director.

Deffat of Proposed Vaccination Bill.—A bill which proposed the extension to private schools the provisions of the law that requires pupils attending public schools to be vaccinated as a means of protection not only to themselves but to their schoolmates and the community at large, has been defeated in the Senate. This occurred in spite of the fact that the members of the committee on public health were unanimous in their favorable report on the petition and letters were read from principals of many private schools, from the leading colleges in the state, and from other educators, expressing the hope that the bill would be made a law. A further effort is to be made by anti-vaccinationists to bring about the abolition of compulsory vaccination in public schools, by the introduction of a bill providing that a written statement from a child's parent or guardian to the effect that he is opposed to vaccination shall be sufficient to excuse the child from vaccination. It is reported that representatives of the State Department of Health are strongly opposed to the proposed abolition of vaccination in the public schools.

NEW ENGLAND NOTES.

War Relief Funds.—The following contributions have been acknowledged by New England War Relief funds:

French Orphanage Fund	$577,087.01
French Wounded Fund, for the American Hospital at Rheims	329,220.08
Fund for Devastated France ..	199,057.73
Fund for Russian Refugees ...	106,954.05

Scarlet Fever at Brown University.—Investigation made by the Health Department of the recent outbreak of scarlet fever at Brown University has shown that it was due to infected milk served in one of the college restaurants. No new cases have been discovered, and the college, which was closed on March 25, was reopened on April 8.

The Massachusetts Medical Society.

COMMITTEE ON PUBLIC HEALTH STATE-WIDE HEALTH WORK.

This is a copy of a letter sent to thirteen health organizations in the State April 10, 1920:

Dear Doctor:

At a meeting at the Boston Medical Library on March 18, 1920, of representatives of organizations interested in state-wide health work in Massachusetts, it was voted that the Public Health Committee of the Massachusetts Medical Society arrange with your organization to select delegates to take part in the completion of the organization of the Massachusetts Health Council.

You are accordingly requested to take such measures as may be necessary to have *two* such delegates present to represent your organization at a meeting to be held for this purpose at the Boston Medical Library on Wednesday, May 12, 1920, at 12.30 P.M.

You are also requested to notify, prior to the date of the meeting, the Secretary of the

Public Health Committee of the Massachusetts Medical Society, Dr. Annie L. Hamilton, 141 Newbury Street, Boston, Mass., whether or not your organization will send delegates, and if so the names of the delegates.

A buffet luncheon will be served.

Among the matters of business which may be expected to come before the meeting are the following:

The election of officers.

The selection of a committee on by-laws.

The selection of a committee on membership.

The selection of a committee on ways and means.

The selection of a committee on legislation.

The selection of a committee on publicity and education.

Yours truly,
Annie Lee Hamilton,
Secretary.

Miscellany.

LUNCHEON FOR GEN. LEONARD WOOD.

A complimentary luncheon for Dr. Leonard Wood was given at the Hotel Somerset by members of his class in the Harvard Medical School, on April 13, 1920. Dr. Henry Jackson, chairman, made the following introductory remarks:

Ladies and Gentlemen:

We have come together to do honor to General Leonard Wood as a noted son of Massachusetts because his early years were passed in this State, though an army man is not a resident of any state. You want to hear what he has to say, therefore my remarks will be brief; yet I wish to rehearse in a few words some of the most remarkable incidents of his career.

He entered our medical class in the fall of 1880 and at once impressed himself by his virile personality and his kindly good fellowship upon all who had the privilege of his friendship. Early in 1885 he entered the medical department of the Army, having passed an examination with high rank. He at once wished to be associated with the Line officers, so that before he was thirty he took an active part in the Geronimo campaign. In this campaign of nearly two years he won the respect of his superiors and his men by sharing with his men all the hardships of this dangerous service. His great endurance enabled him to carry out the whole campaign, and I think he was the only officer who remained with General Lawton from first to last.

Then came several years as surgeon in Washington.

As the result of his training as a line officer, he went to Cuba as Colonel of the Rough Riders. His active mind had so grasped the danger of war with Spain that he had made such preparations that his troop was equipped while others were considering how men could be recruited.

In his position as Governor of Santiago and later as Military Governor of Cuba, he showed his ability as an administrative officer. Perhaps his greatest success was due to his ability to choose men able to do his bidding, and having picked a good man, he trusted him. He chose Cubans to work in Cuba.

He found Cuba dirty, full of disease, and left it well governed, without yellow fever, equipped with schools. After he had cleaned Cuba and found that yellow fever was still rife he was ready to grasp the importance of the suggestion that yellow fever was not a "filth-born" disease and stood back of the heroic work of Surgeon Reed and his co-workers.

Then he was immediately sent to the Philippines as Governor of the Morro Province. In this work he encountered the greatest difficulty, exercised the greatest patience, and only in the end proved to the natives that his work must be carried out, even if force were necessary; diplomacy first, force second.

When the Great War broke on the world, he at once and in all places urged "Preparedness," started Plattsburg and other camps, without, perhaps, adding to his popularity as an officer.

Such has been the career of General Wood:—Geronimo campaign; Colonel in Spanish war; Governor of Cuba; Governor of Morro Province.

Yet a greater victory was his. When in July, 1918, his division was about to sail, he was relieved of his command. Then he conquered himself, a man till then unconquered. He did not sulk, he did not fume, but like a soldier took his order, parted from his men and went back to equip another division.

Dr. Worcester: This meeting, Mr. Chairman, as I take it, is merely a clinical conference—such as we used to have years ago. You remember how they were conducted, how each in turn had to stand up before the class and make a report of a case that had been assigned to him for study. It was not enough to have made a right diagnosis: we were also required to tell what the treatment should be. Perhaps you remember how once, when only the diagnosis had been given, Professor Francis Minot asked, "Well, what would you do for the patient in such a case?" The unfortunate student answered, "Nothing." Then, with a foot stamp that I for one can still hear, came the old soldier's indignant, "But you've got to do something and do it damn quick." I have forgotten the name of that *laissez fairé* student. Of one thing I am sure: it was not Leonard Wood.

In our student days, just as we were divided into sections for dissecting and what not, so we were called upon in alphabetical order to discuss cases of which we were all equally ignorant. And, if I may be pardoned a personal remark, I have always been glad that my last name was at Wood's end of the alphabet. But now in our puzzling cases we have learned to ask for help in diagnosis and therapy from experts in the different specialties. That is what we propose to do now. And, instead of holding this class meeting behind closed doors, we have asked you all to join in our conference, to hear what our specialist in governmental troubles has to say.

For our anxiety today is not for any individual patient. It is for the whole body politic. We are worried about the health of the Nation. We don't like our country's behavior of late towards other members of the family of nations. We have had our surfeit of foreign wars. And, worse than our misconduct in foreign affairs, we cannot help noticing alarming symptoms of grave internal disorders.

There is a general restlessness that bodes ill. Epidemics threaten to become even more rampant. Not only the physical infections that we have long known, but now at our ports of entry, if indeed not already incubating here, there is the new contagious insanity of Bolshevism. Those of us who at close range have seen that disease are as afraid of it as we are of the devil himself, whose child it is.

Confronted as we are by these world-wide perils, that threaten the health and even the life of this nation, and indeed the very existence of civilization, what do we see being done by our Government at Washington? What is the matter there? Is it general paralysis or only an anaemic neurasthenia? Whatever the disease, such bickering in and between the different branches of the government, such loose discharges of words combined with such torpid inaction, certainly indicate the need of heroic remedies. What shall these be?

Plainly we need expert advice. And we need for our advisor one who knows the whole country, from the sand beaches of Cape Cod to the rocky cliffs of the Golden Gate; who knows Washington through and through. We need a man who has had experience in treating community disorders.

Have we such a one? Yes, we have!

If Cuba can be cleaned up and governed honestly and efficiently, why cannot the United States be likewise? It can be!

If it be asked why the medical profession at this particular time should be so concerned with politics, our answer is that while the government was going on fairly well we have left it to the lawyers and other professional politicians. We admit that we have been remiss in the common duties of citizenship. But now we are waking up: nor are we alone in this awakening. Other professions are also taking unwonted interest in the coming presidential campaign. The engineers, for example, are claiming that it would be well for the country to have a mining engineer in the White House. Very well. Such confidence in one's own profession is all right. But it will avail nothing unless such confidence shall be shared by the country at large. And so, if we doctors believe that the country needs for its leader a man who has had thorough medical training, who has made good in finding out and in rooting out the causes of disease, who favors preparedness as the best prevention of war, if, in short, we believe we can point out the man needed, it is up to us to give our reasons for so believing.

There may be those who would grant that while such a preparation perhaps does fit a man for uncovering the essential causes of our national ills, and even for recommending the proper remedies, some folks may question if any physician or surgeon would have the executive ability to carry into effect the needed remedial measures.

Clemenceau in France and our new ambassador from England, Sir Arthur Geddes, both of them doctors of medicine, were not found wanting in this respect. Their medical education and previous service certainly stood them and their countries in good stead during the darkest days. Nor need we go so far afield for an example. We have with us one whose medical training has not seemed to interfere very much with his executive ability.

That he is also a Harvard Doctor of Laws and a Major-General of the Regular Army does not obscure the fact that he is still an M. D.

But I am taking up too much of your time in proving what, after all, needs no demonstration. You, Mr. Chairman, have well explained why we have chosen one of our classmates to give us the diagnosis of our country's troubles. And if you will ask him to tell us also what remedies are indicated, you may be very sure he will not answer "Nothing."

And you, fellow physicians of Massachusetts, after hearing him, you may agree with us that the case of our troubled country may safely be put in his hands. For we all know, and the whole country knows, that Doctor Leonard Wood has never yet failed in any service he has been called on to render.

Dr. Jackson: Gentlemen, I ask you to rise to a toast (necessarily dry).

I give you General Wood: an able surgeon, a successful officer, a great administrator.

Major-General Wood, in response, outlined some of the greatest needs of our country at the present time. Health, he said, is such an important part of the nation's welfare that there should be organized a separate Department of Health, to which should be assigned a cabinet member. There should be, also, a Department of Public Works, with a secretary in the cabinet. If each of these subjects could be managed by one definitely organized department, there would be less overlapping of duties than there exists now when the work is being conducted by many different departments. A third subject which he believes to require more attention is public education, which should be raised to as high a standard as possible: the best teachers should be encouraged by higher salaries.

It is General Wood's opinion that it is not radical changes which are needed in our Government, but a steady building up of a strong public opinion. Those who are rousing race and religious issues are perhaps the most dangerous men with whom we have to deal. It is important, however, that in the deportation of aliens from this country we should be certain of the rights in the cases before taking action against them. In referring to the railroad strike, General Wood expressed the belief that attempts at revolution within organized labor will tend to make labor more conservative. He emphasized the importance of giving aliens intensive courses in Americanism, for which we should awaken as strong and active a national feeling as its enemies have against it.

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MASSACHUSETTS STATE COMMITTEE, COUNCIL OF NATIONAL DEFENSE, MEDICAL SECTION. FINAL REPORT OF SECRETARY AND TREASURER.

April 16, 1920.

To the Subscribers to the Fund of the Massachusetts State Committee, Council of National Defense, Medical Section:

The Massachusetts State Committee was officially discontinued by order of the Executive Committee at Washington, D. C., on April 1, 1919. Since that time the committee has issued a list of Massachusetts physicians in the Medical Corps of the United States Army, Navy, the Red Cross, or the British Service during the Great War, compiled from the cards collected by the committee and checked by the official files in the offices of the surgeon-generals of the Army and Navy, and the Red Cross at Washington. A copy of this list was sent to every man who had been in the service, to the chief libraries of the State and to the authorities at Washington. It appeared that 31.3 per cent. of all the physicians of the State had been accepted by the Government for service. The card catalogue of the committee and all of the records that have been placed in the fireproof vault at the Boston Medical Library, an institution that is always open to every physician of Massachusetts, for future use, should occasion require. The total number of subscribers to the fund was 940; subscriptions of 928 of these were acknowledged in the columns of the Boston Medical and Surgical Journal, issues of August 29 and October 24, 1919; the remaining 12 were acknowledged by individual receipts. The balance of the Fund remaining after all expenses had been paid, amounting to $1,354.19, was paid to the treasurer of the Boston Medical Library, March 18, 1920, by the former executive committee: J. B. Blake, chairman; W. L. Burrage, secretary and treasurer; C. A. Porter, R. B. Greenough, for the purposes expressed in the following vote of the Executive Committee of the Boston Medical Library in accepting the fund at a stated meeting of that committee, held April 12, 1920:

Voted, To accept with thanks the fund turned over to the Library by the Massachusetts State Committee, Council of National Defense, Medical Section, the fund to be known as the "Medical National Defense Fund," the income to be used for the purchase of books on Military and Naval Medicine and Sanitation; the principal to be held for use in case of a military emergency similar to that for which the fund was originally contributed.

TREASURER'S STATEMENT.

Receipts:		
Balance on hand August 1, 1918	$26.31	
Total amount subscribed by 940 contributors	2,072.97	
Interest from State Street Trust Company	46.60	
Total fund		$2,145.88
Expenses:		
Rent of typewriter, printing, stamped envelopes, letterheads, filing cases, cards, trip of Miss E. M. Goodridge, unpaid secretary, to Washington, printing lists of Massachusetts physicians in service in the Great War, mileage of members of Volunteer Medical Service Corps' committee, report of Suffolk County Auxiliary Committee, telegrams, boxing card catalogue and records of committee and placing in the vault at the Medical Library	$791.69	
Paid to Treasurer of Boston Medical Library	1,354.19	
		$2,145.88

Respectfully submitted,

Walter L. Burrage,
Secretary and Treasurer.

RESOLUTIONS ON THE DEATH OF DR. ELMER E. SOUTHARD.

At a meeting of the Boston Society of Psychiatry and Neurology, the following resolutions were passed on the death of Dr. Elmer E. Southard:

In the death of Dr. Elmer Ernest Southard this Society has sustained a severe loss.

From the first, his fellow-members recognized in him unusual qualities of mind and character. Beginning as a worker in the field of neuropathology in its narrowest sense, he soon widened its scope and aims so as to include the major aspects of psychiatry, which owes much of its present position as an important branch of medical science to his leadership and the enthusiasm he inspired in others. While developing the medical and scientific side of psychiatry, he never lost sight of its social aspects, as embraced in mental hygiene.

He planned the laboratories of the Psychopathic Hospital and was its first medical director. With no experience and no traditions to guide him when the hospital was opened, he developed it into a clinic unsurpassed, in some respects, either in this country or abroad.

His industry was unceasing. He was the author of many scientific and other contributions of great value. He attended innumerable meetings and conventions, medical and general, in different parts of the country, reading papers, and taking a leading part in discussions. As a speaker, he had unusual gifts, possessing beside a firm grasp of his subject, clarity, facility and humor.

In addition to his regular duties at the hospital, he always had under his supervision as Pathologist of the Commission of Mental Diseases, special investigations at the State institutions. During the war he was a most zealous and efficient worker and was instrumental in raising the standard of psychiatric work.

He was a man of great force of character, honest and fearless. No one could be a more determined fighter when a principle was at stake, but no one could be more considerate and gentle to those who opposed him. His simplicity, his artlessness and his warm-heartedness made it easy to have a feeling of affection for him.

We mourn the loss of a noble friend of the highest attainments. The best tribute we can pay to him is to emulate his example and keep psychiatry on as high a level as possible, at the same time doing our utmost to make it of practical use to the community, as a means of preventing mental disease.

Walter Channing,
William N. Bullard,
Henry R. Stedman,
Committee.

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Obituary.

EDWARD THAYER TWITCHELL, M.D.

Dr. Edward Thayer Twitchell of Dorchester died at Santa Barbara, California, where he had gone for his health, March 26, 1920. He was the son of Dr. George Twitchell of Keene, New Hampshire, where he was born January 19, 1863. After graduating from the schools of Keene he entered the Harvard Medical School, taking an M.D. in 1886, when he had finished his service as house officer at the Boston City Hospital. He settled in practice at Ashmont and practised there until forced to go away by a breakdown, following the influenza epidemic. Dr. Twitchell was physician to the Convalescent Home of the Boston City Hos~~pital and~~ to Milton Academy; he joined the Massachusetts Medical Society in 1885 and had been Councilor and Supervisor from the Norfolk District. His widow, who was Elizabeth Schuster, of Brattleboro, Vermont, survives him, as do two sons and two daughters.

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ERRATUM.

In the obituary of Professor Southard in the Journal of March 25 it was stated that "he was appointed to the Professorship of Neuropathology endowed by Dr. W. N. Bullard." The Bullard Professorship of Neuropathology was not endowed by Dr. Bullard but by his mother, Mrs. Louisa Norton Bullard, in memory of her husband, William Storey Bullard.

SOCIETY NOTICES.

Wachusett Medical Improvement Society.—A course in early diagnosis of pulmonary tuberculosis and methods of treatment will be given under the auspices of the society, at the Rutland State Sanatorium, through the coöperation of the medical staff of that institution and of specialists in tuberculosis, practicing in Rutland, beginning Thursday, May 20, 1920, at 3.30 p.m.

May 20. History Taking and Physical Diagnosis, Dr. George N. Lapham.

May 27. Classification of Cases. Demonstration of Methods of Physical Diagnosis, Sanatorium Staff.

June 3. General Treatment, Sanatorium Staff.

June 10. Treatment of Hemorrhage and Pneuthorax, Sanatorium Staff.

June 17. Occupational Therapy, Dr. Bayard T. Crane.

June 24. X-Ray, Tuberculin and Other Tests, Laboratory Methods and Simple Technique of Sputum Examination, Sanatorium Staff.

The members of the State Sanatorium staff who will take part in the teaching are: Dr. Ernest B. Emerson, Superintendent; Dr. Leon A. Alley, Assistant Superintendent; Dr. David E. Mann, Dr. Halbert C. Hubbard, Dr. William B. Davidson, and Dr. Mary E. Gaffney.

The object in presenting this course is to promote early diagnosis and control of pulmonary cases and it will be open to all physicians of both sexes. The facilities at Rutland are ample for illustrating any phase of the subject.

There will be no charge for tuition.

For enrollment or further information address

Dr. Ransom A. Race, *Secretary,*
Paxton, Mass.

Worcester District Medical Society.—The next regular meeting of the board of Censors will be held in the Worcester Public Library, Thursday, May 6, 1920, at 4 p.m. Candidates should file application not later than April 20, 1920. Please note change in meeting place.

At the meeting of the Society held on Wednesday, April 14, 1920, at 4.15 p.m., in Red Men's Hall, 19 Pearl Street, Worcester, the following papers were read: War Neuroses, illustrated by slides, Dr. Michael M. Jordan, Worcester; Renal Function Tests, case reports, Dr. Roger Stansfield, Worcester.

Dr. William J. Delahanty, *Secretary.*

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RECENT DEATH.

Dr. Henry Sherman Kilby, a graduate of Harvard College in the class of 1873, and of the Harvard Medical School, class of 1878, died suddenly at his home in North Attleboro, on the evening of April 10, 1920. He had been critically ill with pneumonia, but was considered well on the road to recovery when the end came without warning. Dr. Kilby was born 68 years ago in Eastport, Maine, and received his early education in the public schools of that town and at the high school at Chelsea. After a year as surgical interne at the Boston City Hospital, he began practice at Wrentham, remaining there six years. Then followed a period of travel in Europe, and in November, 1884, he took up his permanent residence in North Attleboro. He had been a Fellow of the Massachusetts Medical Society since 1877. He served for years on the school committee and also as school physician, a position he held at the time of his death. For 26 consecutive years he was parish clerk of the Universalist Society, but recently resigned that office. He leaves his widow, formerly Miss Mercy Francis of Taunton, and one brother, Quincy Kilby of Brookline.

The Boston Medical and Surgical Journal

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Original Articles.

THE RELATION OF TEETH TO GENERAL HEALTH.

BY CHARLES H. LAWRENCE, M.D., BOSTON.

UNTIL recently, the physician regarded the teeth as the dentist's responsibility, and looked upon their function as a purely mechanical one, beneficial indeed, but not absolutely essential. The effect of general diseases such as syphilis upon the teeth was recognized, but regarded as of importance largely as a diagnostic sign of disease, and the loss of an efficient mechanism for mastication was of importance mainly from a cosmetic point of view. True, medical literature since the time of Hippocrates contains occasional observations concerning the effect of the teeth on general health, but these are usually concerned with their influence upon the development of the jaws and facial bones. As portals of entry for infection, the tonsils enjoyed unchallenged popularity, and the systemic degenerative diseases were usually ascribed to the effects of heredity, exposure, alcohol, diathesis, or autointoxication.

Gradually, however, by scattered reports of relief from so-called incurable conditions following the extraction of carious or abscessed teeth, attention was turned toward them as possible etiological factors in organic disease. And when, in 1914, Rosenow[1] reported that organisms of the streptococcus-pneumococcus group could gain entrance to the body through the teeth, and thence hie themselves to its uttermost parts, changing their appearance as they went, the medical profession enthusiastically accepted diseases of the teeth as the roots of all the evil which had not previously been assigned to some other cause.

Pyorrhea was suspected of causing many of the diseases of the digestive tract, and when peridental and apical abscesses were found coexisting with nearly all chronic organic disease, it seemed logical to many minds to establish a causal relation between the former and the latter. The result thus far has been an awakened appreciation of the importance of the care of the mouth, which is undoubtedly beneficial, and the extraction of thousands of teeth, the beneficial effects of which are in many cases open to doubt.

A review of the literature brings to light a vast deal of theory upon the relation of dental conditions to general health. It is theory only, and while it is valuable in stimulating research, it does not form a sound basis for treatment of patients. It is important, from the practising physician's point of view, to separate theory from proven facts, and to use the former as a guide in his examination of problems, the latter as the criteria of his procedure.

What are the facts concerning the first, or temporary teeth? That their eruption may cause loss of appetite, depression of the digestive function and nervous irritability in a child seems proven by clinical experience. It was long believed that "cutting teeth" was an adequate explanation of convulsions in infants. I cannot find satisfactory proof of this theory, and I believe that it is dangerous to accept it without reservation. There have been instances in which no other cause for convulsions was found by most thorough examination, but they are rare. Eruption of a tooth should never be accepted as the cause of convulsions until most painstaking examination has eliminated all other possible causes.

Malocclusion of the temporary teeth has been satisfactorily proven to cause improper development of the palatal arch and facial bones, with resulting nasal obstruction and its results. And there is no doubt that a high percentage of children with badly decayed teeth show other physical defects: Adenopathies, anemias, iritis, nasal obstruction, otitis, and rachitis. Odenthal,[2] for example, found glandular swellings in 99% of children having badly decayed teeth, against 49% of those having no caries. Dr. Wright of the Harvard Dental School has shown that contagious diseases are more frequent in children with carious teeth than in those whose teeth are sound. But does the coexistence of carious teeth and systemic disease prove that the former cause the latter? Or is the reverse true in some cases? or may both be due to improper diet and malnutrition? It must be borne in mind that carious primary teeth usually mean a neglected child, and that other factors, such as improper diet, or obstructed breathing, are probably present.

These conditions must be eliminated before a coincident anemia or infection can fairly be ascribed to the dental caries. The general health will, of course, always be benefited by the proper treatment of the diseased teeth, but caution must be exercised in accepting them as the cause of systemic disease, in order that less easily demonstrated but more important factors be not overlooked.

More important than the temporary teeth as factors in general health is the second or so-called permanent denture. Persisting much longer, it is by that very fact more subject to diseases. These occur most frequently after the middle of the third decade, and are thus contemporaneous with the degenerative systemic diseases. Research upon the causes of these conditions has disclosed the fact that infection in and around the teeth commonly coexists with many pathological conditions of obscure origin, and that in certain instances, improvement in general health follows the elimination of the dental sepsis.

Billings[3] has shown clinically that infection of the teeth is common in patients with chronic arthritis, and that elimination of such infection often has a beneficial effect upon the joint condition. Cultures of the streptococci obtained from apical abscesses have caused arthritis when injected into rabbits. Gilmer[4] has found pyorrhea or apical abscesses in the majority of patients seen by him for iritis and allied ocular diseases. Miller[5] has isolated 58 varieties of organisms from the mouth, "many of which were pathogenic or under certain conditions might become so." Hartzell and Henrici[6] were able to demonstrate the streptococcus viridans almost invariably among other organisms in cultures taken from apical abscesses, and even in cultures from the roots of healthy teeth. Thoma[16] has shown that maxillary sinusitis is often secondary to apical abscess, and has called attention to its relation to other diseases of the nose and throat.

The situation is summed up by Barker,[7] who in 1918 stated that arthritis, osteitis, osteomyelitis, periostitis, myostitis, embolic pneumonia, pleuritis, nephritis, ureteritis, myocarditis, endocarditis, pericarditis, lymphadenitis, neuritis, neuralgia, iritis, anemia, septicemia, and pyemia, may in certain cases have their origin in oral sepsis, and that there is a growing tendency to look upon the same etiological factor as contributory in many instances to chronic degenerative diseases like arteriosclerosis and hypertension. He further enumerates the following disturbances of the digestive tract as the most common ones associated with oral sepsis: Gastritis, gastroenteritis, achylia gastrica, pylorospasm, toxic hepatopathies, and probably some cases of gastric and duodenal ulcer.

It would seem that the quantity of evidence against the teeth was overwhelming. But a careful analysis of its quality makes conviction less certain. The majority of the articles are statements that infected teeth were found in the mouths of those suffering from a given disease, or assertions that oral sepsis *may* in certain cases, cause pathological conditions. Granting the possibility, is there any available evidence as to how often they do?

Hammond, analyzing forty cases of arthritis, found that in only twelve were the teeth alone diseased. After treatment, one case showed striking and immediate improvement, one improved after subsequent use of vaccine, three cases showed "some improvement," two were unimproved after extraction and one after pyorrhea treatment, one improved without dental treatment, and one could not be traced.

At the Robert Brigham Hospital, examination and treatment of the teeth of all patients was carried out systematically. Dr. Thoma, who had charge of the work, found that in a series of eighty-one patients, seventy-two had dental abscesses, and that in order to put their mouths in proper condition it was necessary to extract three hundred and thirty-four teeth. These patients were suffering from chronic disease, in the majority of cases arthritis of long duration. In very few was there definite improvement following the extractions. This does not prove that the local infection, if that be the cause of arthritis, did not originally gain entrance through the teeth. If so, it had become firmly established in the joints, and late extraction could do no good. It must be remembered, however, that many sound bacteriologists have been unable to confirm Rosenow's finding of streptococci in the majority of arthritic joints, so that the assumption that the teeth are portals of entry for infecting organisms in arthritis is as yet not firmly established. The fact that streptococci cultivated from the teeth cause arthritis in rabbits loses much of its significance in the light of Billings' statement that "streptococci from any source may produce acute joint lesions in inoculated animals, especially rabbits."

Almost every physician, however, has seen cases of chronic disease which improved remarkably after the elimination of dental sepsis. It is not to be denied that infected teeth cause disease elsewhere in the body, but I can find no convincing evidence that they are usually responsible for the many diverse conditions ascribed to them. Black[3] reports a series of roentgenograms of all the teeth of three hundred individuals. They were selected irrespective of medical and dental histories, and examined for the existence of oral and systemic disease. There were eighty patients under twenty-five years of age so examined. Forty-eight, or 60%, showed x-ray evidence of peridental or apical abscesses, or both. Sixty-nine, or 86%, were classified as negative as regards systemic disease; six, or 7.5%, complained of occasional muscular or joint pain, and five, or 6%, gave a story of well defined systemic disease. There were fifty-one patients between the ages of twenty-five and twenty-nine. Thirty-eight, or 71%, had dental sepsis, and three, or 5%, had systemic disease. Between thirty and thirty-nine years of age, 87% of patients showed oral sepsis, with 9% of organic disease; between forty and forty-nine years, 89% had abscessed teeth and 20% had systemic disease, while after fifty years of age tooth infection was present in 100%, and 32% had organic pathology. It will be noted that there was a sharp rise in systemic disease incidence between 40 and 49, though there was only a 2% increase in dental sepsis as compared with the preceding decade. The figures for the entire series showed that 77% of all the patients had dental abscesses, and 77% were free from organic disease, 23% giving systemic pathology. The presence or absence of other possible causes of the systemic diseases was not noted by Black, nor is there a comparison, as regards general health, with a series in which he found no sepsis. It cannot be said, therefore, how much the incidence of organic disease was increased by the oral sepsis, but there is no indication that dental infection was a fertile cause of pathological conditions. Hammond[9] states that in the majority of cases the dental lesion is so thoroughly walled off that many deny the possibility of this condition becoming a focus of infection except in rare instances.

However thoroughly the septic process may be walled off, it is conceivable that it may cause systemic degenerative changes by acting as a source from which continued absorption of small amounts of protein takes place. These small continued doses of poison may act directly on the various tissues, or may sensitize the body to a whole group of proteins which would then act as toxic agents. It has been shown by Miller that protein sensitization is not specific, and the work of Walker demonstrates that a patient sensitized to one protein is usually sensitized to several. The beneficial results in arthritis, obtained by intravenous injections of suspensions of dead typhoid bacilli also suggest that arthritis may be due to protein poisoning.

The great objection to this theory lies in the fact that it has never been demonstrated, in a sufficient number of instances of coexisting dental and systemic disease, which existed first. Cardiac disease, nephritis, arteriosclerosis, anemia, indeed all chronic diseases have a depressing effect upon the general health, which may conceivably allow previously sound teeth to become infected. That pathogenic organisms do exist in the roots of healthy teeth has been shown by Hartzell and Henrici, and the injurious effect of chronic disease upon the nutrition of the teeth has long been known. It therefore seems as logical to suppose that an anemia or a nephritis may depress the local resistance and allow active dental infection to occur as that the reverse is the case. Carbuncles and diabetes frequently coexist, and proper treatment of the carbuncle usually improves the diabetic's condition, but it is not argued that carbuncles cause diabetes. In regard to oral sepsis in this disease, Joslin[10] says, "It is my impression that the changes in the teeth are subsequent to the onset of the diabetes, but I am open to conviction on this point." At present, who can say more, as regards any chronic disease, on either side of the case, if individual instances are excepted?

Because of these individual instances, in which the elimination of dental sepsis gives brilliant results, there is a tendency to regard any tooth which shows an abnormal shadow on the x-ray film as the cause of almost any coexisting disease of obscure origin. As is usually the case when a new discovery is made, there has been too much enthusiasm concerning the possibilities of dental infection, too much generalization, and too little careful, critical investigation. Many ingenious theories have been advanced, and a few facts established. It may be regarded as proved that in certain instances dental sepsis does cause systemic disease. Therefore a careful examination of the teeth should always be made, and the patient should be questioned concerning dental symptoms. It should be remembered that the absence of pain does not exclude abscesses at the roots, and that if no other foci are found, and the systemic disease suggests focal infection as an etiological factor, dental consultation and x-ray examination of the teeth should be made. Infected teeth which serve no useful purpose should always be extracted. But if the x-ray findings alone are positive, extraction of useful teeth should be reluctantly performed, since results show that benefit is obtained in only a small number of cases and the extracted tooth is not always as bad as the x-ray indicated. No promises of cure should be made, and the patient should clearly understand that the operation is in the nature of an experiment. Even though dental infection be present a careful search should be made for other foci. Absorption from tonsils, pharynx, sinuses, pulmonary infections, digestive and genitourinary tracts should be eliminated before the teeth are held accountable. It must be remembered that caecal stasis, a diseased gall bladder, or an infected prostate may be the cause of systemic disease, and foci which can be eliminated without the loss of useful organs should be treated before suspected teeth are extracted. Oral sepsis which can be successfully treated without sacrificing the efficiency of mastication should be eliminated in every case. It should not be forgotten, however, that mastication is an important part of digestion, and that disorder of nutrition may arise from lack of teeth. In his work on disease of the heart, MacKenzie[11] says, "The great importance of oral digestion is not sufficiently appreciated. Not only does the process of mastication in several subtile ways stimulate the digestive glands of other organs, but the juices from the mouth which are mixed with the food not only assist digestion but prevent the flatulence which is so often a troublesome feature in the weakened digestion of heart failure." This statement applies with equal force to a large number of chronic diseases, the treatment of which is greatly complicated by an ill behaving stomach or a foul mouth due to lack of sufficient teeth for chewing. Anemia and disorders of the digestion may be due in some cases to dental sepsis—in others they are as surely caused by too radical extraction in its treatment.

For this reason, when extraction is necessary, care should be taken that the patient is not left with an insufficient masticating mechanism. The extraction of the diseased teeth is often only half the battle—substitutes must be furnished. The method of doing this is of course a question for the dentist to decide, but I believe that from the standpoint of cleanliness, artificial teeth should not be permanently fixed in the mouth. From the medical point of view, permanent bridge work and similar devices are not desirable.

Such, I believe, are the facts concerning the relation of the teeth to general health. They should not be confused with the theories. The latter are interesting, and will in the future answer questions which are at present vexatious —but they do not form a basis for the intelligent treatment of the individual problem.

The need at present is a method of determining whether the teeth are the cause of the organic disease. So far, this test consists in extracting the teeth and awaiting the result. A test which can be used before extraction would render such a method unnecessary. Cotton[12] has employed the complement fixation test, and finds it valuable in doubtful cases. Unfortunately the technical difficulties of the test greatly limit its use. In conjunction with Thoma, I am at present using the skin reaction to bacterial proteins in a series of cases to ascertain its usefulness in determining the part played by oral sepsis in any individual instance. Our series is not yet large enough to draw deductions from, but if the test proves reliable, its simplicity will make it available in all cases. Thus far, the results obtained by the skin reaction have coincided with the bacteriological findings. A full report will be made when sufficient evidence has been obtained.

Until more clinical facts are available, caution should be used in promising results from the extraction of diseased teeth. Even though extraction is necessary from the point of view of mouth cleanliness, it may not cause improvement in a long established disease process. Unjustifiable enthusiasm is sure to cause reaction, and bring ill repute upon a theory, which though not yet properly tested, offers real hope in the solving of many difficult problems in medicine.

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[2] Odenthal: Arch. Int. Med., 1912, ix.
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[16] Thoma: Oral Abscesses.

THE MILK SITUATION.

By Howard Swift, Concord, Mass.

For the last twenty-five years, here in Massachusetts, there have been sporadic attempts to clean up the milk situation. The diseases that are transmitted through milk that are of any great danger to man are diphtheria, typhoid fever, scarlet fever, foot and mouth disease, septic sore throat, and tuberculosis. The first four are now well regulated; in the United States we are free from foot and mouth disease, and the first three, being acute infectious diseases, are watched carefully. Septic sore throat breaks out occasionally, but it is not so very prevalent, while tuberculosis, a slow insidious disease, chronic in nature, is an enemy that should be considered seriously.

There are three types of tuberculous organisms,—avian, human, and bovine. The avian does little damage, although it is a menace to poultry men. The human type may be transmitted through milk as typhoid, diphtheria and scarlet fever are, but that is more or less a simple thing to control. The bovine type is larger than the human or avian and more virulent in that it kills both rabbits and guinea pigs, while the human kills guinea pigs only and the avian kills rabbits only. The much discussed question immediately comes up as to whether the bovine type affects humans. [1]Robert Koch, the scientist who discovered the bacillus, said in an address before the Tuberculosis Congress of London in 1901, that bovine and human tuberculosis were different diseases; that the human disease was not transferable to cattle, and that it was not necessary to protect a man from pearl disease or bovine tuberculosis. This statement is right in that human tuberculosis does not materially affect cattle, but bovine tuberculosis does materially affect man, as has been shown by many investigators. It has been found that: [2]"Intravenous injections of tubercle bacilli from human sources, non-virulent for cattle, are capable of conferring an immunity against tuberculosis sufficient to withstand natural infection by association." But the report goes on to say, "Until further knowledge is obtained in regard to the destruction or outcome of the living tubercle bacilli constituting the vaccine, no practical method for the immunization of milk producing animals under ordinary conditions can be advocated." It is also believed by many that childhood infections, caused by drinking milk containing living tubercle bacilli, produce an immunity and therefore tuberculous cows are to some extent a good thing. Very probably that would be true if we were always sure that the child was getting a small regular dose of tubercle bacteria in the milk. The amount of tubercle bacteria in milk is an unknown quantity always and undoubtedly milk from a cow with a tuberculous udder contains an innumerable number of tubercle bacteria which in all probability if fed to a human being would cause a very active case of tuberculosis. The natural answer is to remove any cow with a tuberculous mastitis from the milking line. Unfortunately that is easier said than done because, [3]"Unlike other affections of the mammary gland, tuberculosis does not at once change the appearance and quality of the milk secreted. It is a fact that for months after the disease has appeared in the gland, the milk is to all appearances normal and may be sold and consumed without arousing the least suspicion." [4]"This alteration of milk can occur rather quickly. After one month the milk can become distinctly changed. Usually, however, this does not occur until after two months. There are cases, however, in which the milk had retained its normal appearance until four months after the inception of the condition."

[5]Vanderpoel Adriance, M.D., says that "accumulated evidence shows that childhood infection is only the beginning of an adult tuberculosis and if the children are protected adult tuberculosis will diminish." [6]Dr. Harold Dana repeats the above statement by saying, "Ninety per cent. of all children who reach the age of 14-15 years have tuberculous infection; that most if not all tuberculosis of later life is acquired during childhood. Better milk laws and a cleaner milk supply will diminish, if not abolish, milk borne infection."

Dr. Adriance also gives some figures gathered from various sources. Mitchell, of Edinburgh, in some experiments he conducted on enlarged glands in children, found 90% caused by the bovine bacillus. Melcher found 88% to be bovine. Fraser, on bone tuberculosis, found 62% bovine, 35% human, and 3% both. Pollock found 96% of the children in Vienna reacted to a tuberculin test before 15 years of age. [7]A. P. Mitchell, in examination of milk found, in 406 samples taken from different dealers, 20% to be infected with the bovine type. Dr. Brown[8] of Saranac claims that 8% of all cases are of bovine origin and [9]Drs. Park and Krumwiede of the New York Board of Health say that 12.5% of the fatal cases under five years are of bovine origin. Taking Dr. Brown's figures as fair, there were 11,440 deaths from bovine tuberculosis in 1913.

Remember that milk alone is not the danger—butter, cream, cheese, buttermilk, and bologna sausage, in fact, any dairy product that is eaten raw is dangerous. Taking milk as the commonest cause, pasteurization is believed to be the remedy. Before giving the results of some experiments on pasteurization, let us know the state requirements and what pasteurization is. Pasteurization by law calls for[10] holding milk, not more than 72 hours old at a temperature not less than 140° F. nor more than 145° F. for not less than 30 minutes and immediately cooled to 50° F. or lower. Defined pasteurization is[11]: Heating milk at various temperatures below boiling for a variable period of time. To do this, there are three distinct methods—The "Flash" method, the "Holder" method, and pasteurization in the final container. The "Flash" method, where milk is held at a high temperature for a few seconds and flows continuously is not as satisfactory as the "Holder" method, because some milk may be heated in excess of the temperature intended and some milk may not be heated sufficiently.

Pasteurization in the final container is the best method, because it does not afford any opportunity for the milk to be reinfected. But most of the apparatus constructed to heat milk in the bottles is costly, it is more expensive to operate; the bottles must be tightly sealed, requiring a more expensive cap; larger bottles must be used to take care of the shrinkage in cooling and the vacant space permits the milk to be agitated, which may disturb the cream or cause the cream to butter if agitated while warm. The "Holder" process is the commonest commercial method. Exposure to heat to this extent cannot be depended upon to destroy all the toxins and the decomposition products, which may be present in milk as a result of bacterial growth, while at the same time it destroys the anti-scorbutic properties of milk. Moreover, it is not certain that it does not decrease the digestibility of milk.

Let us now look at the efficiency of pasteurization as shown by experiments[11] that have been conducted abroad and in this country. Foster and Rullman found that the tubercle bacilli remained alive in milk kept at 140° F. for 45 minutes. DeJong found living tubercle bacilli after an exposure from 159.8° to 161.6° for 30 minutes, and Van de Sluis found that 176° F. for 60 minutes killed bacilli in naturally infected milk, *i.e.*, milk taken from tuberculous animals. In some American experiments with milk artificially inoculated, *i.e.*, non-tuberculous milk that had a pure culture of tubercle organisms poured in, it was found that 140° F. for 10, 15, 20, and 30 minutes was sufficient to kill the bacteria. These experiments were conducted by Russell and Hastings, Theobald Smith, Rosenau, and Hewlett. A word more about these experiments. They were all done with small samples. In naturally infected milk, the organisms are imbedded in mucous masses, fibrin clots, and tissue shreds. This albuminous covering protects them from heat. In commercial pasteurization, large amounts of milk are run through at once, and in many cases a great deal of the milk may not be sufficiently heated. Besides, a great deal depends on the man doing the work. If the milk is run slowly through the 90°-110° region, the optimum temperature for bacilli to multiply, and then run up fast, and if the same thing happens in the cooling, a great many more bacteria are liable to be present. Also a great many doctors dislike to feed pasteurized milk to infants.

[12]"Saving human life affords the highest motive for combating tuberculosis," prevention of financial loss is alone sufficient reason for undertaking the eradication of the disease from farm animals. Taking all items into account, the aggregate animal loss because of tuberculosis among animals in the United States is estimated at not less than $14,000,000." [13]In 1907 the District of Columbia commenced to reduce their bovine tuberculosis figures. At that time there were 18.8% reactors. In 1917 there were .8%. There are, we all know, a great many more cattle in Massachusetts than in the District of Columbia, but nevertheless if done carefully, it is possible to follow the good example that has been set. To attempt such a movement, coöperation with the farmer is essentially needed and Massachusetts will never have the necessary whole-hearted coöperation until the farmer is given a fair show, which means in the first place more than forty dollars for a condemned animal.

The milk producer is a necessity today. He is a manufacturer of one of the most important items of human food that is used. [14]"Of the list of 19 foods, full records of which have been kept by the U. S. Bureau of Labor, milk stands the lowest in point of average increased price from April, 1918, to April, 1919, *viz.*, 70%. The other 18 range from 72% to 123% increase, an average of 93% increase. Not one of the other 18 foods equals milk in all around food value." The farmer must pay more for all he uses, his investment increases as the cow's value increases and yet his product has not increased proportionately. If the reactors should be removed from a farmer's herd he would lose from 135 dollars and up today per head. Is it any wonder that the farmer dislikes to have the word tuberculosis mentioned? Of course the eradication of bovine tuberculosis is a tremendous idea. Perhaps it is the most Utopian of all dreams. At present the idea of eradication and control of human tuberculosis is in the same class. It would appear though that the control of human tuberculosis depended to an appreciable extent on a much closer control of bovine tuberculosis. To control this menace, first allow the farmer something nearer the true value for a condemned animal. He would then be a little more willing to help in the fight. Second, start a demand for tuberculosis-free milk. This can be done and ought to be done by education of the physician first, who in his turn will educate his patients. Some farmers have said that they would make tuberculosis-free milk if there was a market for the product and if they could receive a price that would allow them a better margin in which to stand the losses.

As has been said above, milk has increased less in price than 18 other foods. When eggs are selling at 70 cents a dozen milk should sell at 41 cents a quart. There is 4/7 as much food value in a quart of milk as there is in a dozen of eggs. People do not feed cheap case eggs to children if they can help it. Then why feed cheap, disease-laden milk? There is no question but what milk should cost more money and be made in a better way if it is to be fed raw to infants, who do not have a very great resistance to disease. Has any one proved that an immunity is produced by drinking infected milk? If that has been done, tuberculous wet nurses would be in demand. Safety First is a popular motto. Is not this the place for it?

To conclude:—Milk in a raw form often endangers the health of infants. The amount of immunity that is transmitted through infected milk for tuberculosis is an unknown quantity. Pasteurization as called for by the present law may not be as safe as is generally believed. There is a considerable loss of life and impaired health directly attributable to the use of infected dairy products. Under the present demand by the public, the producer cannot afford to manufacture a cleaner and better product. Therefore, the medical profession, or those of them who are not awake to the danger, should apply as much prophylaxis as possible.

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THE NEW CLINIC.

AN ADVANCE MOVEMENT IN CHILD WELFARE AND RACE REGENERATION.

BY J. VICTOR HABERMAN, A.B., M.D., M.S.D.,
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THE New Clinic is an *idea*, as yet a bit premature, but about to enter the experimental and transversion stage—presently to be an established and familiar fact. The plan calls for the founding of a constituent in behalf of the *normal* child, or let us say a clinic or institution *for the general survey of The Child*, to which children of all ages shall be brought for examination and rating regarding their antecedents and present status in a manner and on a scale not hitherto attempted, and given therapeutic and "constructive" counsel in accordance. Here a child would be studied in relation to its heredity—and its potential and latent trends, normal and abnormal, as intimated through such investigation; its environment and social condition; its infancy and early childhood; its stature, weight, nutrition, development, etc.; its "internal secretions" in their bearing on its growth, maturity and mental development, as well as from the point of view of glandular *type* or "trope," and hence character-*penchant* and disposition to disease; its mental make-up—trends and intelligence; its talents, vocational abilities, etc. Upon the findings noted, therapeutic, pedagogic, social and other corrective measures would be suggested as aids in mitigating or nullifying negative tendencies, in spurring the uphill growth of such individual and inducing the fullest maturing.

A clinic of this nature will inaugurate an entirely new movement in the interest of the child and the community, and, once actualized, will in all probability constitute the real *clinic* of the future. The child will no longer be left to find itself, as at present, nor necessarily reap the mischief of its inheritance, nor first have to fall into disease or upon evil days before being taken in hand and given the necessary advice for its redintegration. On the contrary, the data obtained through modern study of heredity and heritable diatheses, psychopathy, endocrinology, nutrition, etc., etc., and the effective spirit underlying such modern movements as "Mental Hygiene," "Remedial Pedagogics," "Vocational Guidance," "Race Regeneration," "Life Extension," etc., will here actually be applied, and to all children—not only the patently abnormal—of the community.

In a short study published several years ago under the title of "Clinical Psychology in Its Relation to the School and to Social Medicine,"* I already touched upon this matter. Therein I then, among other things, said:

"Abnormalities in the internal secretions may cause mild or serious retardation, possibly mental infantilism, even precocious advance (hyperpinealism?). In fact, such important strides have been made of late in this field of science, that no one, at this stage of investigation, can aver or deny that the internal secretions are not the constructing, stimulating and inhibiting factors in the entire upbuild and psychodynamic leverage of the brain and mind. Our therapeutic and experimentally therapeutic administration of these gland secretions, so easily carried out, may in time prove of inestimable value in the treatment of mental defects and abnormalities, possibly, too, in the mitigation of fatigue and pathologically affected attention, in the goading of interest, diligence, ambition, even in the stimulation of mental exuberance, physical growth and general maturity. Very aptly did Woods Hutchinson express himself not long ago when he said, 'We are such stuff as ductless glands are made of, and our little life is rounded with a sheep.'

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* Medical Record, Nov. 20, 1915.

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"There is another decidedly grave problem, the one of most far-reaching significance, to be taken up. . . . Can one, during the school years, discern signs or symptoms in the child which possibly presage nervous or mental trouble or disaster for it in the near or remoter future? And if this is so, could one not institute proceedings which would keep such child from becoming a future neurasthenic or hysterical or obsessed or psychopathic individual, or, indeed, from becoming a delinquent or criminal, or from the fate of insanity itself? And can aught be done for that pathetic class of mortals who are entirely normal up to the eleventh or twelfth year, or to puberty, and then suddenly cease progressing, or begin to deteriorate into one of the deplorable forms of dementia? What an immense proportion of our members are finally disposed of under one or other of these ominous headings!

"And yet we know through such studies as those of Ziehen, Stelzner, and others, that a very large number of such individuals show prognostic signs of impending mischief in childhood (or may have a sinister augury even in their heredity) and that ever so many can be saved to themselves and the State if treated and mentally nutured in time."

Since then the idea has grown apace, and we now have in mind a fully rounded clinical procedure which would overhaul each child physically, mentally, socially and especially anent its latent potentials, and thus work out its horoscope, so to speak, and rearrange its constellations.

We suggest first, the starting of a single such clinic or *center* at which this work would be pursued under direction of a staff of experts, statistical data gathered and the work taught to other groups who would presently carry on elsewhere. In time, every public and private school should have its contingent of examiners and advisers,—a special "personnel"—caring for its individual charges.

It is scarcely an exaggeration to augur that at some near future day the child will not only be fed proper food in order to thrive, but endocrine substances, so as to equilibrize and harmonize growth-tendencies in its physical and mental maturing. The child of dwarfed stock will be given something—possibly thymus-pituitary-thyroid substance—to increase its stature. Such as are sprouting over-tall and lanky will be offered something—possibly gonad substance—to hold their bones in check. The child that is dull or mentally inactive through inheritance or constitutional make-up, will be fed with thyroid or gland combinations, thus to stimulate cortical growth and metabolism. If neuropathy is noted in its inheritance or tuberculosis in the home, the child will be placed in an open-air school and trained with an eye to storing up resistance and meeting eventualities with reserve energy and brawn. Sedative inhibition will be prescribed for some, stimulation for others. Many will be taken from their homes and placed in brighter or more propitious environment, for cheerfulness is necessary to a healthy unfolding, and in all probability, even rhythmic dancing will have its therapeutic place in the school, to dissipate fatigue and foster exhilaration and joy. Not only, however, will the child be tended with an eye to its shortcomings, but by all means with its abilities and special traits in mind. These will be sought out and opportunity given for their individual development. Already these measures are being plied here and there in progressive hands, and sooner or later the facts themselves will be commonplace. The new clinic is to forestall this movement and place it on a systematized and scientific basis.

INTESTINAL OBSTRUCTION.

By E. A. Codman, M.D., Boston.

(Concluded from page 424.)

Case 5. Perhaps this case should not be included in the series for it did not strictly show obstructive symptoms. However, as the paper is not really a statistical one and the case is typical of an important diagnostic point, I have put it in with the others. The point is that sarcoma of the intestine, unlike carcinoma, does not cause obstruction. In other words, the consistency of intestinal sarcoma is such that it sloughs out centrally and grows peripherally, whereas cancer usually shrinks in an annular manner. Sometimes cancer looks like a cicatricial ring about the intestine, so small that the inexperienced might take it for a scar. The operator who finds a *large* intestinal tumor may make a guess that it is sarcoma, especially if the tumor is within the small gut. By *large* I mean the size of an apple—even of a small apple!

The practical clinical point I want to make is this: *Intestinal tumors larger than a small apple do not demand an artificial anus.* If they are growing peripherally you may be pretty sure that they are sloughing internally. It is the small contracting kind that make the trouble.

I have had two other cases of intestinal sarcoma which should perhaps be included in this series, but they both followed the same rule. They were large tumors operated on as exploratory laparotomies rather than for obstructive symptoms. In all three cases the tumors were soft and friable and were ruptured in endeavoring to bring them out of the wound. You might describe them grossly as necrotic dilatations of the intestinal canal rather than strictures. All three died soon after the operation.

Even if the tumor is not sarcoma, but a rapidly growing cancer, the chances are that it will slough centrally rather than produce obstruction, and you will be glad that you did not assume that because there existed a tumor, it would necessarily later cause obstruction. The same rule applies to growths of the rectum. Many a patient has been condemned to an artificial anus by the operator assuming that obstruction would necessarily ensue, when as a matter of fact Nature would have sloughed out the growth. Of course in this connection I am speaking only of inoperable growths, for I believe that intestinal cancers should be excised, even if there are evident metastases in the glands and liver. Enterostomy is a wonderful temporary expedient, but only in people with suitable temperaments is it a justifiable condition for daily life, especially if that life is to be a short one. Its true use is to drain the bowel just long enough to give the patient a maximum chance for a radical operation.

Case 13. This, I believe, was the first case of successful intestinal resection and suture for intussuception at the Massachusetts General Hospital. It was, as in Case 28, caused primarily by an inverted Meckel's diverticulum, Unfortunately the patient was a criminal and I fear that society was not helped by his recovery. And, speaking of criminals and intestinal obstruction, I wonder if a certain individual, whom I have several times been called to see at the Massachusetts General Hospital, has ever turned up at the hospitals in Springfield. I know he has at several of the Boston hospitals, and I have heard of him in other cities. He has severe chronic obstruction, probably from postoperative adhesions. There is a large surgical scar on his abdomen, and he presents a most exaggerated case of visible peristalsis. Great coils of intestine writhe about his abdomen. He is a dope fiend and his game is to enter a hospital as an emergency, to be seen by a member of the staff and listen to advice that he will die if he is not operated on. He gets as far as the operating table, and then bolts—refusing at the last minute. In this way he obtains his dose of morphine and then goes out to an apothecary and moves his bowels with croton oil.*

Cases 24 and 31 may be spoken of together on account of their dissimilarity, for one had a maximum amount of small intestine removed, and the other a maximum amount of large gut put out of commission. The first had 235 cm. of small intestine removed for multiple tuberculous strictures. There have been a few cases recorded where even more than this length of intestine has been successfully removed. This patient survived, but later developed tetany and returned to the hospital, where her case was carefully studied by Dr. W. W. Palmer. Palmer published a paper in the *American Journal of Medical Sciences* in December, 1914. This paper shows that there are still young men capable of enthusiasm for medical advance, and with the zeal, application and energy to do the work, which even Fitz might have envied. One must look with admiration on the detailed work, which is reported in this concise, clear, paper of Palmer's. His conclusions show that it is very doubtful if we are ever justified in removing so much of the small intestine. His summary follows:

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* In the discussion it developed that several of the surgeons in the audience had seen this person, whose case illustrates the wonderful hypertrophy of which the small intestine is capable.

"1. Absorption studies after resection of more than half of the small intestine are reported.

2. The loss of nitrogen in the stools is four to five times that of normal individuals.

3. The loss of fat in the stools is five to six times the normal loss.

4. A high urinary indican, 800 mgrs. is reported (normal 10-50 mgrs.).

5. Ammonia forms a much larger part of the urinary nitrogen than in normal individuals. This is probably due to the extensive putrefaction taking place in the intestine.

6. The success with which a large portion of the intestine may be removed depends to a large degree on the condition of the intestine remaining. This fact, I believe to be important and should be considered carefully before extensive resections are undertaken.

7. A diet low in fat and moderately low in protein should be given in cases where much intestine has been removed."

Palmer found that he could control the tetany in this patient by alteration of the diet and the administration of calcium. However, he could not at the same time keep up her nutrition. She grew thinner and thinner, and left the hospital weighing about 80 pounds and in very poor mental condition. There were palpable masses in her abdomen suggesting recurrence of the original disease. She died one year and three months after the operation.

On the other hand, the case without the use of the large intestine, grew very fat, or rather, still fatter, for she was fat before the operation.

This patient was first operated on by Dr. Hugh Cabot for a volvulus of the large intestine. A colostomy was done and after the patient recovered a second operation was done to close the fecal fistula. Four and one-half years later I saw her with a recurrence of the acute volvulus, which involved the cecum and most of the large intestine, there being no adhesion of the colon to the parietal wall, either congenital or postoperative. The gut was gigantic, and the obstruction was evidently chronic, for no acute condition could have led to such enormous distention and at the same time thickening of the walls. An emergency cecostomy was again done, but I felt that something more would be necessary to really cure the condition, and accordingly after a few weeks I isolated the large bowel by doing an ileo-sigmoidostomy and dividing the ileum near the ileo-cecal valve and the descending colon just above the ileosigmoidostomy. The proximal end of the descending colon was then brought out on the surface, like an artificial anus, although of course the fecal stream did not pass through it, as the whole large intestine was completely sidetracked. However, it was necessary to do something to provide an exit for the discharge of intestinal mucus which otherwise would accumulate in the enormous blind pouch. Thus it was possible to syringe into the cecostomy and have the washings come out of the colostomy.

My plan in thus isolating the abnormally dilated portion of the intestine, was founded on the idea that it would shrink from disuse, when the fecal stream no longer passed through it, especially as the chronic obstruction was relieved and there would be no gas to dilate the gut. I intended later to excise the isolated portion when it had become reduced to normal proportions, and the mesenteric bloodvessels which had been huge, had, through lack of use, atrophied. The plan worked well, in fact so well that the patient would not consent to another operation. She is still living, eight years after the operation. The cecostomy has closed, but the colostomy is still open and through it every week or two comes a well-formed fecal mass, in appearance and odor much like normal feces, although of course there is no food residue—only the secretions of the intestinal mucosa. The case offers a wonderful opportunity to study the physiology of the large intestine, for not only the chemistry of the secretions could be determined, but food could be injected and the absorptive power of the large intestine studied. Her nutrition does not seem to suffer but she has a hernia in the scar.

All three of the cases of volvulus of the large intestine which I have operated on were of the cecum, although it is said that twists of the sigmoid are more common. All my cases had the fetal type of cecum and ascending colon without parietal adhesion. I am more and more struck by the influence which congenital faults have in bringing about pathologic abdominal conditions. Even inflammatory conditions of the appendix and gall bladder have their real origin in kinks, in many cases. Volvulus is associated with lack of parietal adhesion, just as intussusception is associated with Meckel's diverticulum. Case 32, for instance, had no parietal attachments and the cecum even roamed so far, that the appendix was attached to the *left* costal border by inflammatory adhesions. In this case I removed the dilated proximal half of the colon, for it seemed certain to get into trouble again if I returned it to the abdomen without some anchor. In Case 19 I did nothing but untwist the gut and put it back and this was the only case which died. Death took place suddenly from pulmonary embolism, after the wound had healed and the patient was about to go home. I assume the embolus was in the stem of the twist all the time, in one of the mesenteric veins. Perhaps such cases are not often reported, and it may be safer to resect than to return the damaged gut.

In looking over the rest of the series to find the lessons they have taught me, which I may transmit to you, I find it a temptation to talk about every case, for I am proud of them all. Moynihan says: "During the operation, the surgeon will need all his dexterity, rapidity, and judgment." Unfortunately these qualities are not transmissible by speech or paper, even if I possessed them, but to my mind success depends more on the surgeon's mental than his manual processes. Knowledge and judgment in using it, seem to me the important factors. Local anesthesia and anociassociation may take the place of much rapidity and skill, desirable as they are. Moynihan concludes his paragraph: "The surgeon must discover what has to be done and must do it with all possible despatch." To that I emphatically agree. I like the use of the word "must." Sometimes it merely means an abdominal section and incision of the first distended coil which presents; sometimes the resection of several feet of intestine, followed by anastomosis. Atypical cases will frequently appear where unusual expedients are necessary, but the more extended our knowledge, the less frequently will the atypical be seen, and the less frequently the expedient be unusual. Judgment really consists in our applying our knowledge of possible expedients to our knowledge of possible pathologic combinations. The surgical interne of today will get better results in these cases than the wisest and most fashionable surgeon of a century ago. His judgment may be poorer, but the range of his knowledge is far greater.

There are a few more of my cases which, though not illustrating as important principles as those I have spoken of at length, may still add to your knowledge of possible pathologic conditions and possible expedients which may be used to combat them.

Case 27, although successful as far as my operation was concerned, had a recurrence of the intussusception twice afterward and was operated on by another surgeon with a fatal result. I regret that I did not excise a gland, the size of a walnut, which lay in the mesentery at the ileocecal junction. This gland was, I believe, the cause of the tendency to invaginate. Judgment at the time said that I did all that "must" be done, and I did it "with all possible despatch." But judgment, now that it has the knowledge of that case and its final result, would insist on enucleation of the little gland. Of the four cases of intussusception here reported three had pathologic entering points. In the fourth none was found; simple reduction and appendectomy was done; no recurrence took place. I do not believe it necessary to "anchor" the gut in cases of reduced intussusception, if no abnormal entering point is found. In ileocecal cases it may be well to take out the appendix.

Cases 25 and 35 illustrate that two cancerous strictures sometimes exist in different parts of the large intestine, and that it is well to look the intestine over before going to work.

Case 25 also illustrates that the same patient may have a tuberculous stricture and later a cancerous one. It teaches that spontaneous umbilical fecal fistula should make us suspect primary cancer of the sigmoid. It illustrates splendidly Porter's method of mobilization of the peritoneum to close large defects of the abdominal wall. This case and Case 30 illustrate what W. J. Mayo has tried to teach us—that cancer of the large intestine, even though advanced enough to involve the abdominal wall, may still be operable, because some types have tendency to spread *only by local extension,* and though presenting a tremendous abdominal mass, do not have metastases. In Case 30 I removed two separate portions of the gut, did four end closures, two lateral anastomoses, and excised the whole mass together with a good-sized piece of the abdominal wall, which the cancer had invaded. Yet no recurrence had taken place five years later.

Case 40 showed that an adherent cancerous omentum can cause obstruction secondarily and that it may be relieved.

Case 21 illustrates the value of an excessively high leucocyte count (35,000) in arriving at the diagnosis of mesenteric thrombosis. In obstructive conditions the presence of such high counts should suggest this diagnosis. In my opinion, it is almost pathognomonic.

Case 29 adds impaction of a coil of intestine beneath a previous intestinal anastomosis to the list of possible causes, and teaches the wisdom of so suturing the mesentery after anastomosis, that the gut cannot pass under the bridge.

Case 41 illustrates how insidious the onset of complete obstruction may be in cases of cancerous stricture, which have shut down slowly and by dilatation and infiltration of the wall of the intestine have accustomed it to hold an amount of toxic fecal material which probably would have produced death if acute. This patient continued to feel so well, had so little pain and vomiting, that she could not be persuaded to have an operation until two weeks without a movement had passed and various purgatives had been administered. The effectiveness of the purgatives was demonstrated, when her enormously distended tympanitic abdomen was opened and she was found to have had a movement in her own abdominal cavity! The tympany was due to intraperitoneal gas: the intestines, not particularly distended themselves, lay beneath this gas cavity lightly glued with fibrin. On raising the omentum I found a large puddle of free soft feces lying on the adherent coils of small intestine. This was gently wiped out without further exploration and a drain introduced. Although 76 years old, she recovered (of course with a fecal fistula), only to die six weeks later, after an attempt to excise an adherent cancer of the descending colon.

So much for the unusual cases. As to operative technique, I attribute the success of this series almost entirely to the early diagnosis. Next, to the general advance of surgery—such things as general abdominal technique, moist sponges, cigarette drains, avoidance of postoperative cathartics, gentle manipulation, the use of local anesthesia with or without general anesthesia. Preoperative stomach washing and the other things which generally contribute to the success of ordinary cases, are doubly important in these critical cases. There is one method, however, which, owing to the modesty of its originator, needs more advertisement. Monks' work on intestinal localization is known to many but it should be *studied* by every surgeon who ever expects to do an operation for obstruction. The Monks tube should be used in most cases of obstruction and in some cases of wounds of the intestine. I feel sure that some of my earlier cases died from intestinal absorption after the obstruction was released. They stood the operation well, but their toxic symptoms went on rapidly from bad to worse, and they died in the next 24 to 48 hours without rallying. The contrast is striking when the intestine is drained on a Monks tube (any tube will do, *e.g.*, a glass drinking tube). The slight shock the intestinal manipulation causes is well compensated by the result. I believe there is an actual immediate improvement in the pulse, after this is done, comparable to that wonderful improvement the pulse shows when the stomach is washed out for acute dilatation. I even think it justifies a second incision in cases of strangulated hernia, where the outcome seems doubtful. In using it, the only practical hint necessary is to make a large enough incision so that the gut can be threaded on the tube without pulling on the mesentery. When you use it, use it thoroughly, and empty the whole small intestine. The shock caused by threading the tube will be compensated by the shock avoided in closing the wound over distended coils.

There are certain general principles which should influence judgment in these cases:

1. The stomach should be emptied before operation, by the use of the tube. Vomiting is too often partial—a mere overflow.
2. Local anesthesia should be used whether or not general anesthesia is necessary also. This is to combat shock.
3. The obstruction must be relieved.
4. The circulation of the involved gut must be restored, or the non-viable portion resected (with liberal removal of any doubtful infiltrated intestine proximal to the constriction, in cases where immediate suture is contemplated.)
5. The content of the bowel above the stricture should be removed.
6. In all but the most extreme cases, the cause should be at least determined and judgment used as to simple enterostomy or removal of the cause.
7. Recurrence should be considered and if possible prevented.
8. Unessential details should be sacrificed to speed, but the seven principles mentioned take precedence of speed.

Of the expedients to which the surgeon may resort to accomplish the ends the following are the chief:

1. Simple enterostomy—a small median abdominal incision and a deliberate cut in the first distended coil which presents. (Moynihan calls attention to the fact that curiously enough this is usually the most desirable coil.) It is almost as simple to tie in a Paul or Mixter tube and save soiling of the wound. (Case 10.)
2. Search for the cause and selection of the most favorable place for an enterostomy. (Case 24.)
3. Removal of the cause. (a) Taking time for its liberation as in the cases of the bands, twists or invaginations (Case 33); (b) taking time for its excision as in cancer or gut devitalized by twists (Case 4).
4. Removal of cause followed by colostomy (Case 22).
5. Removal of cause followed by anastomosis of intestine (Case 35).
6. Removal of cause, lateral anastomosis and proximal enterostomy (Case 28).
7. Short-circuiting of cause by lateral anastomosis (Case 36).
8. Short-circuiting of cause by exclusion as in Case 24.
9. Ligation of pedicle and enterostomy (Ref., BOSTON MEDICAL AND SURGICAL JOURNAL, April 2, 1908).
10. The use of Monks' tube in addition to any of the above (Case 40).

Success will depend on the surgeon's judgment in choosing the right alternative in accordance with the above principles in the individual case. He must modify his desire for an ideal result by a just estimate of his own technical ability and of the patient's capacity to bear further manipulation.

In my opinion, the use of the Monks or Moynihan tube to remove the poisonous content above the obstruction, should never be given up because of the condition of the patient. A case which would die because of the slight additional shock of this procedure, would surely die later from the septic absorption; on the other hand cases may seem in good condition on the table and yet never rally after an apparently completely successful operation. where the toxic contents are left in the gut. Even when a colostomy is made, toxic absorption may still go on, before peristalsis awakens in the distended, infiltrated, anaesthetized intestine. I am inclined to think that the importance of the factor of toxic absorption is underestimated by the average surgeon who worships speed, but Kocher and Moynihan—true masters of surgery—have given the message for all who will stop to listen.

INFERENCES FROM THE SERIES.

The series includes all the acute and a few severe subacute cases of intestinal obstruction on which I have operated in the last 20 years, and also one in which I assisted Dr. C. A. Porter (Case 25). Cases of low rectal cancer, cases of vicious circle following gastroenterostomy, and cases of strangulated hernia, are not included. Such a small series can hardly be expected to furnish statistics, but we may draw inferences and stimulate someone to investigate the statistics of some large clinic. Since intestinal obstruction is not a distinct pathologic entity but rather a common symptom of several or many conditions, and further, since the line between acute and subacute obstruction is next to impossible to draw, we cannot expect to come to mathematical conclusions. Nevertheless, there is in every surgeon's mind a composite picture of this class of case, which, though hard to define, has a real meaning.

Mortality. Of the 41 cases, 14 died in hospital, although four of these did not die of obstruction, but of pneumonia, or embolus, two or more weeks after the operation. The series of 27 cases since January 1, 1904, have all been successful as far as the relief of obstruction was concerned, although one died of lung embolus on the 16th day and one of pneumonia on the 14th. All the cancer cases but one died of the disease or operation for it sooner or later. There have been no known bad late results among the non-malignant cases, except those described above.

The inference is that modern surgical methods are adequate for the relief of obstruction if we consider:

The influence of early diagnosis. Of the 14 cases which were fatal, all but Case 2 had had symptoms for over 48 hours. Of the 27 which survived 14 had symptoms less than 48 hours, while of the remaining 13 the cause was subacute or an exacerbation of a chronic one.

The inference is that the practitioners of this community have applied the appendicitis lesson

Case	Hosp. Number	Date	Age	Sex	Duration	Result	Cause	Operation
1	A Western hotel	4/12/99	35	m	48+ hrs.	Death in 14 hrs.	Cicatricial appendix	Appendectomy
2	A private hospital	4/24/00	42	f	24 hrs.	Death in 24 hrs.	Contraction scar penholder	Release bands
3	M.G.H. 374-176 E.S.	7/31/00	78	m	4 days	Death in 24 hrs.	Band mid. small intes.	Release bands; tap. intes.
4	M.G.H. 390-124 E.S.	6/26/01	68	m	3 days	Death in 24 hrs.	Mesenteric thrombosis	Resection 6 ft. enterostomy
5	M.G.H. 390-194 E.S.	7/15/01	32	m		Death in 24 hrs.	Sarcoma small intestine	Resection tumor, enterostomy
6	M.G.H. 392-36 E.S.	7/17/01	33	f	subacute	Death on 14th day	Tuber.stricts. intestines	Resection 14 ins.; anas.
7	M.G.H. 390-230 E.S.	7/22/01	50	m	5 days	Death on 5th day	Annular cancer sigmoid	Resec. and anas.
8	M.G.H. 390-200 E.S.	7/26/01	17	m	48 hrs.	Recovery	Post-op. ads. (recent ap.)	Release and enterostomy
9	M.G.H. 394-102 E.S.	8/12/01	47	m	5 days	Death on 9th day	Post-op. ads. (old)	Enterosotomy
10	M.G.H. 394-182 E.S.	9/ 3/01	31	m	48 hrs.	Recovery	Post-op. ads. (recent)	Enterosotomy
11	M.G.H. 412-163 E.S.	7/ 3/02	30	m	48 hrs.	Death in 48 hrs.	Band from Meckel's div.	Excision diverticulum
12	M.G.H. 128468 E.S.	8/19/02	8	f	24 hrs.	Death in 24 hrs.	Post-op. ads. (recent)	Release and enterostomy
13	M.G.H. 129172 E.S.	9/26/02	24	m	3 days	Recovery	Intussusception (Meckel's)	Resection and anas.
14	M.G.H. 133222 E.S.	7/18/03	19	m	48 hrs.	Death in 48 hrs.	Band from Meckel's div.	Release bands; tap. intes.
15	M.G.H. 136311 E.S.	2/28/04	6	f	24 hrs.	Recovery	Intussus. (ileo-cecal)	Appendectomy and reduction
16	M.G.H. 122-121 S.S.	11/18/05	54	m	24 hrs.	Death in 1 month	Cancer hepatic flexure	Cecostomy
17	M.G.H. 150-318 E.S.	11/17/06	43	m	5 days	Recovery	Undetermined. Anuria	Colostomy and divulsion strict. urethra
18	M.G.H. 155296 E.S.	10/16/07	34	m	5 days	Recovery	Post op. ads. (old)	Release ads.
19	M.G.H. 161404 E.S.	12/ 5/08	62	m	3 days	Death on 16th day	Volvulus cecum.	Release of twist.
20	Malden Hospital	6/10/09		f		Recovery	Ads. from prev. perit.	Release ads.
21	M.G.H. 166524 E.S.	10/23/09	44	m	4 days	Recovery	Mesenteric thrombosis	Resection 4 ft.; anas.
22	M.G.H. 167195 E.S.	12/ 2/09	67	m	24 hrs.	Recovery	Cancer of sigmoid	Resection and enterostomy
23	M.G.H. 169347 S.S.	4/11/10	18	m	48 hrs.	Death on 14th day	Post op. ads. (recent)	Enterostomy
24	M.G.H. 176271 W.S.	5/25/11	45	f	5 days	Recovery	Volvulus cecum	Exclusion large intestine
25	C.H. 53	8/22/12	37	f	subacute	Recovery	Cancer trans. colon & sig.	Resection and anas.
26	M.G.H. 184608 W.S.	8/26/12	21	f	3 days	Recovery	Band from ad. appen.	Release and appendectomy
27	M.G.H. 184848 W.S.	9/ 9/12	5 mos.	f	3 days	Recovery	Intussus. mes. glnd.	Reduction
28	C.H. 105	3/21/13	46	m	34 hrs.	Recovery	Intussus. (Meckel's)	Resection; lat. anas.; enterostomy
29	M.G.H. 188264 E.S.	3/25/13	40	f	5 days	Recovery	Rotation abt. anas.	Reduction and closure opening
30	C.H. 110	3/28/13	57	m	subacute	Recovery	Cancer cecum, ileum, etc.	Resection and anas.
31	M.G.H. 189750 E.S.	6/20/13	39	f	subacute	Recovery	Multiple tuber. strictures	Resection 9 ft. and anas.
32	C.H. 155	9/13/13	66	m	48 hrs.	Recovery	Volvulus cecum.	Resection and anas.
33	C.H. 222	10/ 6/14	45	m	14 hrs.	Recovery	Post-op. ads. (old)	Release ads.
34	Deaconess	10/ 7/14	41	f	3 days	Recovery	Post-ops. ads. (recent)	Release ads.
35	C.H. 237	2/ 3/15	45	f	subacute	Recovery	Cancer sigm.	Resection and anas.
36	C.H. 258	5/18/15	59	m	subacute	Recovery	Cancer (il.-ce. and rec.-sig.)	Lateral anas.
37	Home, Ayer, Mass.	11/16/16	73	f	8 hrs.	Recovery	Band and partial volvulus	Release ads.
38	C.H. 387	3/ 8/17	62	f	18 hrs.	Recovery	Band in appen. region	Release ads.
39	Cousens Hospital	6/22/18	55	m	24 hrs.	Recovery	Post-op. ads. (old)	Release ads.
40	N. E. Sanitarium	7/31/19	63	f	12 hrs.	Recovery	Cancerous omentum	Excision portion, enterostomy
41	York Hosp.	8/19/19	76	f	2 wks.	Recovery	Cancer desc. colon	Drainage of spontaneous perforation

M. G. H. = Massachusetts General Hospital

C. H. = Codman Hospital

(in many cases perhaps unwittingly) to this condition also. But the 48th hour in obstruction is far more significant than in appendicitis.

Pathologic Causes		
Mesenteric thrombosis		3
Tuberculous stricture		2
Malignant stricture		10
Intussusception		4
Volvulus		3
Rotation about anastomosis		1
Bands and adhesions		
not from previous op.	6	
previous op. (recent)	4	
previous op. (late)	5	
Meckel's diverticulum	2	17
		40
Undetermined		1
		41

Inferences. Bands and adhesions are the most common cause although in about half the cases there had been no previous laparotomy. This is surprising, but is substantiated by the statistics of Fitz (1888), who found that bands were the most common cause, although in those days laparotomies were relatively uncommon.

Age in Relation to Cancer. It is said that most cases of obstruction in patients over 45 are due to cancer. Of the 19 cases over 45, 8 were due to cancer, 6 to bands, 3 to volvulus, 1 to mesenteric thrombosis, 1 to intussusception.

Inference. In a patient over 45, if there is no previous history of laparotomy and the onset is not sudden, cancer is much the most probable cause.

Sex. Seventeen females, 24 males, is in accord with previous statistics.

Book Reviews.

A Treatise on Cystoscopy and Urethroscopy. By Dr. Georges Luys, Former Interne, Hospitals of Paris; Former Assistant in the Department of Urinary Diseases at the Lariboisiere Hospital; Laureate of the Faculty of the Academy of Medicine. Translated and Edited with Additions by Abr. L. Wolbarst, M.D., New York; Cystoscopist, Beth Israel Hospital; Consulting Urologist, Central Islip and Manhattan State Hospitals; Genito-Urinary Surgeon, West Side German Dispensary and Hospital; Author of "Gonorrhea in the Male," etc. With 217 figures in the text and 24 chromotypographic plates outside the text, including 76 drawings from original water colors. St. Louis: C. V. Mosby Company. 1918.

In these days, when the cystoscope and the urethral endoscope have come to be recognized as the basis of the diagnosis of so many of the diseases which afflict the urinary tract, any book on the subject which comes from the pen of an author of experience cannot fail of interest. Ever since the cystoscope was in the infant stage of its development, Dr. Luys has been keen to provide some means of studying the divided urines, and his segregation was an ingenious effort in that direction.

He now comes forward as an advocate of the direct vision instruments, and this book is, as he says, an effort to "popularize the science of direct vision cystoscopy," and to illustrate in detail the possibility which it offers. Although direct vision cystoscopy has not been received in this country with universal commendation, it has its many followers, and it certainly has its many indications for usefulness.

The book, although a large one, has but few chapters. They deal with the technic of urethroscopy and cystoscopy and their practical applications. In the two chapters, devoted respectively to indirect and direct vision cystoscopy, there are many interesting comparisons of the two methods, and many illustrations of their value in definite conditions. The chapter devoted to the history of endoscopy, urethral and vesical, together with the interesting discussions on its varied technic, make the book of real importance to those concerned in such work. It is pleasant to note the excellent quality of the publisher's work, and to appreciate his wish to make it, in these times of high cost of production, his "contribution to France."

Clinical Case-Taking. By Robert D. Keith, M.A., M.D. New York: Paul B. Hoeber. 1919.

Prepared as a hand-book for students in a colonial hospital, this little book is a simple, informal outline of methods employed by the author in case-taking. In the form of a notebook the subject matter is arranged under General Examination, Circulatory System, Respiratory System, Digestive System, Nervous System, Excretory System, and a final chapter on Microscopical Examination. No attempt has been made to offer the book as a standard nor to lay claim to superiority of method. It is not technical in its descriptions and is obviously intended as a brief summary of the points to be covered in the elementary physical examination of patients which goes to make up the routine of the medical student's early practical experience.

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THE STATUS OF THE DEFECTIVE DELINQUENT SINCE THE WAR.

UNTIL the large number of defective delinquents in this country was revealed by the war, there was manifested toward this group of citizens little concern outside of the profession and among sociologists. It remained for the statistics revealed by the Provost Marshal General's report to arouse public and legislative opinion to a recognition of the magnitude of this problem and the necessity for further information and suggestions in regard to its solution. In this work, Dr. Guy G. Fernald, Resident Physician of the Massachusetts Reformatory, Concord, has rendered valuable service by discussing the status of the mental delinquent and the possibilities of his reformation and return to some place in society. Of especial interest are two of his articles, "The Defective Delinquent Since the War," and "Current Misconceptions Regarding Reformations."

Of the 442,000 men rejected or discharged from our army during a period of about fifteen and one-half months, in 5.54 per cent. of cases the cause assigned was mental deficiency. It is interesting to compare this figure with 5.36 per cent. rejected for mental and nervous disorders and with .4 per cent. rejected for the misuse of alcohol and drugs. A definite group of 14,417 men of drafted age has been computed as unfit for military service because of mental deficiency. If this ratio of prevalence of mental deficiency found in the army were to be applied to the twenty-four million men enrolled for service we shall have a group of 1,330,000 men liable to rejection for mental deficiency.

The existence of this large group of extra-institutional feeble-minded, including, of course, some defectives of vicious tendencies, indicates the necessity of adequate consideration of the welfare and possible reformation of its members. Certain individuals are good subjects for reformation if their vicious environment be changed to a healthful, moral, and intellectual atmosphere, if this change can be made before the end of the formative period of life, and if the period of healthful environment can be continued beyond the usual penal institution sentence in order that habit formation may assist self-determination when that is tentatively restored. This group of mental delinquents should be segregated completely from all other groups during the period of retraining.

There are undoubtedly some members of the group of defective delinquents unamenable to any method of reformation or rehabilitation. These, after demonstrating their unfitness for community life, must be returned to custody. Hitherto, however, the legal status of defective delinquents has been limited to that of the fully equipped offenders: the latter are subject to the same court procedure and are sentenced to the same penal institutions unless they are found to be insane or feeble-minded to such a degree that they are committed to schools for the feeble-minded. Should not these members of society be judged in the light of their deficiency rather than their delinquency, and measures be adopted so that they can be committed to a suitable environment, a farm colony, perhaps, where their rehabilitation can be at least attempted? Dr. Fernald believes that it is hardly to be expected that our method of placing these people among fully equipped offenders for a short period of time should lead to any rehabilitation of the defective individual, but that it is probable that a defective committed indefinitely to a farm colony would appreciate the fact that he must "make good" in order to regain his liberty. This situation would call forth his best efforts.

It is commonly believed by many unthinking persons that a wrong method of living can be changed with little difficulty to a right one whenever the attempt is made, and that in some miraculous way a person may be reformed merely by serving a short sentence in a reformatory. The fallacy of this belief has been demonstrated thoroughly, and those who deal with defective delinquents intelligently know that it is a long, difficult, and discouraging process. For this reason we should make every effort to determine the right way to deal with these cases. The first mental activity to be aroused in the offender is believed by Dr. Fernald to be a feeling of regret for the damage which has been done to his own life and to others. The intention to do better in future is the next logical step, which must be followed by some definite constructive plan for better thinking and acting for a period of perhaps five years. During this time, the delinquent should be taught a trade and given what education is possible; he should become one of a group of good associates and friends, and advance considerably on the road to reformation. After some such definite plan has been worked out, the next step for the patient is to make up his mind to follow this plan and determine to adhere to it. The last stage involves going out into the world and living the plan. In many instances, the delinquent may not have sufficient mental equipment to succeed; to care for such cases there should be institutions suitably equipped to train them slowly to form new and better habits of thought and action. Such institutions, or farm colonies, are essential if we are to aid the mental delinquent and make his life a success. Legislative measures to this end are not easy to secure, but it may be hoped that as the need becomes more generally recognized, it will be possible to commit mental delinquents to a favorable environment for a suitable length of time, during which they may be provided with some simple remunerative occupation, education and mental training, and correct medical and moral treatment.

TWO DERMATOLOGICAL PROBLEMS.

We have received recently reprints of two excellent articles of value and interest, written by Charles J. White, M.D., of Boston. In one of these there is presented a critical analysis of sixty-four cases of lichen planus, observed in the private practice of the author. The disease appears to be a relatively uncommon one, in New England at least. It is subacute, at times an acute disease, affecting largely the educated classes, especially those who have suffered some mental disquietude; it seldom follows as a result of an injury. Of the sixty-four cases observed in this series, during a period of nine years, there were forty-four among the old American stock, six each among German-, Scotch-, and French-Americans, one Armenian, and one patient from Ecuador. The disease appears most commonly between the ages of thirty and sixty, and varies greatly in duration; a few cases last only a few weeks, while others last many months, and some persist even to sixteen years. In this group, although the initial lesions appeared first on the flexor surfaces of the wrists in twenty-one per cent. of the cases, they appeared also on almost every other part of the body, even on the mucous membranes, where the characteristic violet coloration becomes silvery white. The eventual distribution of the eruption may be universal. The typical objective lesion is an almost pathognomonic papule, although many variations commonly occur; the disease is primarily a pruritic one, entailing suffering at times almost unbearable. Pathologically, there has been noted an initial change in the corium and a subsequent epidermic alteration; perhaps the most characteristic pathologic feature is the almost geometrically straight, inferior border of the cellular infiltration. Treatment of these cases was found to have a palliative effect, but their cure seemed to depend largely on natural evolution.

In a second article, Dr. White has discussed the question of epidermophyton infection, basing his observations in this problem of dermatological diagnosis on the study of one hundred and ninety-two private cases. It appears that the epidermophyton is capable of infecting singly the thighs and the adjacent skin, the toes and feet, the fingers and hands, the axillae, the bends of the elbows and of the knees, the flat surfaces of the trunk and extremities and the scalp, or conjointly any combination of these regions. The infectious agent in this disease is the epidermophyton inguinale, first definitely proved and established in 1910 by Sabouraud. The sources of infection seem to be difficult to determine, there being only two well-defined sources—the use of soiled athletic clothes and the intimate contact with clothing of animal origin. The positive cure of this disease is not easy, inasmuch as a peculiarly penetrative and selective and powerful weapon is needed to destroy the fungus without exerting too strong an organotropic effect. Dr. White has described his methods of treatment, mentioning especially the favorable results obtained by the careful and judicious use of Whitfield's ointment. As there has been little written on this subject from a first-hand knowledge of the disease, and a large proportion of medical practitioners, at least in New England, appear to be ignorant even of the existence of the condition, this paper has been written chiefly for the purpose of emphasizing the importance of the whole question of infection with epidermophyton or its kindred organisms.

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ENDORSEMENT OF THE POST-GRADUATE $2,000,000 CAMPAIGN BY THE NEW YORK ASSOCIATION FOR MEDICAL EDUCATION.

The New York Association for Medical Education, organized last August to develop New York's opportunity to become the medical centre of the world, has endorsed the campaign of Post-Graduate Medical School and Hospital for a $2,000,000 Endowment Fund as "worthy of support because it is an important step toward providing a very necessary training for graduate physicians."

The board of directors, on which every medical school in the city is represented, has given official approval to the endowment campaign. The following remarks have been made by Dr. Wendell C. Phillips, president of the association:

"America must meet the enormous demands of the physician for training that will keep him abreast of the progress of medical science. Post-Graduate is the oldest institution for post-graduate medical training in the nation. It is in an excellent position to do a great work. But if this work is to be done, it must have funds.

Berlin and Vienna have fallen as centres of medical education, but even if they had not, New York's opportunity would be huge, for nowhere else is to be found the wealth of clinical material that this city holds.

"Medical schools and hospitals in New York—and conspicuously Post-Graduate—are bending every nerve to provide the training rendered abroad. If they succeed, the 3,000 to 5,000 physicians who went abroad in the years before the war will come to New York It will mean a saving of time and money, for those trips abroad consumed time and were expensive.

"Institutions to provide this sort of training must be provided at home. We have the instructors, for American physicians and surgeons rank high in the medical world. We must teach our young physicians what they should know and we must give the older ones a chance to learn the new things that medical science is constantly developing."

It has been announced that the Endowment Fund now has reached $545,000.

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MEDICAL NOTES.

Outbreak of Measles on the Britannia.—A message received from Dr. H. G. Ebert, federal port physician, states that an outbreak of measles occurred among the nine hundred immigrants coming from southern Europe on the steamer *Britannia,* due in Providence on April 10. Those suffering from the disease were removed to the Providence City Hospital.

Spotted Fever in Galicia.—A report from Berne states that spotted fever is epidemic in eastern Galicia. During the months of January and February, 43,000 cases were reported. In some of the Ukrainian districts numerous villages were almost depopulated and in the mountains the disease was complicated by hunger and typhus.

A Physician as Author of "Ben Bolt."—It is interesting to note that the author of "Ben Bolt," for which Thomas Dunn English was chiefly remembered, was a physician, as well as a journalist, a politician, poet, essayist and novelist. Although his professional and public careers are forgotten, "Ben Bolt" has lived for two centuries. Dr. English was born in Philadelphia in 1819. He served in the New Jersey Legislature during the Civil War, and in 1890 was elected to Congress. He wrote fifty plays, more than a thousand poems, and one novel; yet his fame rests wholly on this one poem, which is known throughout the United States and Canada, England and the British possessions.

Transfer of Dr. Hugo Fuchs.—It has been announced that Dr. Hugo Fuchs, professor of anatomy at the University of Königsberg, has been transferred to the University of Göttingen. Dr. Fuchs will succeed Professor Merkel.

Royal College of Surgeons at Edinburgh.—The Royal College of Surgeons of Edinburgh has accepted a proposal to admit women as fellows. They will be admitted on the same conditions as the men, and will take the same examinations and be allowed the same privileges.

Gift to the American College of Surgeons.—The sum of $75,000 has been given by the Carnegie Corporation to the American College of Surgeons to be used for hospital standardization. This is the second gift which the corporation has made to the college; in 1916 it gave $30,000, making a total of $105,000. This fund is supplemented by funds of the college.

Honorary Elections to the Royal College of Surgeons.—The Royal College of Surgeons has elected as honorary fellows Dr. J. M. T. Finney of the Johns Hopkins University and Dr. Charles H. Mayo, of Rochester, Minnesota.

The National Children's Bureau in Belgium.— It has been announced by the Children's Bureau of the U. S. Department of Labor that a national children's bureau has been established in Belgium. It is interesting to note that the law establishing this bureau went into effect several months after the child welfare conferences held under the auspices of our own Children's Bureau in the early summer of 1919. Three child welfare experts represented Belgium at that time.

The functions of the Belgian Bureau are to "encourage and develop the protection of childhood, and especially to further education with regard to rules of child hygiene and to assist in their application, whether in families or in public or private child-caring institutions; to promote the organization of agencies interested in child hygiene, and to assist them by subsidies or otherwise; to assure supervision by the administrative authorities and physicians over the agencies thus protected."

The bureau is directed by a Board of forty members, called the *Conseil Superieur des Oeuvres de l'Enfance*. This Board has the decision on all questions relating to the protection of children; it issues orders concerning the functions of subsidized agencies; it takes necessary measures for the protection of children within the limits of the law, and determines the use of funds at the disposal of the bureau.

To decentralize the work of the bureau, provincial committees are to be established in each province. These committees will consist of from six to twelve members, who will see that the work is organized thoroughly throughout the province and that the orders of the Board are enforced; they will also render opinions or give suggestions to the Board. In addition to this, local committees on which local authorities must be represented are to supervise the infant welfare stations and the agencies which render help to young children and expectant or nursing mothers. One local committee in each community must see that school meals are distributed and special food provided for anemic children. The cost of the school lunches will be met one-half by the state, one fourth by the province, and one-fourth by the community.

The members of the local committees are to meet in regular conference with the provincial committees for the purpose of discussing problems of common interest. All committees, both local and provincial, and the Board are asked to respect the religious and philosophic convictions of the families to which the children belong.

In order to gain the approval of the national children's bureau the infant consultation centers, among other things, must provide for a regular and free physical examination of all children under the age of three in families under the care of the centers and for the organization of educational work to emphasize the value of infant hygiene and breast feeding. The bureau is to organize a system of supervision over placed-out children under seven years of age.

MEMORIAL TO SIR WILLIAM OSLER.—The following account of a public meeting held in the University Museum, Oxford, on March 6, to initiate a memorial to the late Sir William Osler, Bart., Regius Professor of Medicine in the university for the past fifteen years, has appeared in a recent issue of *Nature:*

> Sir Clifford Allbutt, who introduced the proposal, paid a feeling and eloquent tribute to the memory of Sir William Osler, to the wide range of his intellect, and to the singular charm of his character. He referred to his international reputation and to the binding influence he had on the medical profession in many lands, to his love of peace and goodwill, and to the extraordinary power he exerted in diffusing without diluting friendship. The president of Magdalen, Sir Herbert Warren, mentioned the many-sidedness of Osler's interests and activities, the breadth and accuracy of his scholarship, and the clear and steady optimism with which he regarded life and its progress in all ages. Sir William Church, who introduced the specific proposal that the memorial should take the form of an Osler Institute of General Pathology and Preventive Medicine, stated that such a memorial as that suggested would be a singularly appropriate tribute to the outlook and ideals that Osler had kept before him in his life-work. Professor Thomson emphasized the need of new laboratory accommodation in Oxford for teaching and research. The dean of Christ Church and Sir Archibald Garrod also spoke. It was announced that the honorable secretary, Professor Gunn, had received expressions of sympathy with the proposed memorial from a large number of people representing many interests, and that a collateral committee had been formed in America to aid in raising the memorial.

TYPHUS IN RUSSIA.—A report has been made by M. Semashko, Commissar of Public Health, to the effect that the typhus in Russia is at present under control and the sanitary conditions improved. He seems to fear, however, a possible epidemic of cholera during the coming summer. M. Semashko is reported to have issued the following statements:

> While there are comparatively few cases of cholera in Russia at present, the disquieting feature is its wide distribution. Our records show that cholera exists in thirty-seven localities. Between December 1 and February 13 there were 425 cases at Cheliabinsk.
>
> The typhus epidemic is well in hand. The disease is most prevalent in the Caucasus, Turkestan and the Ukraine, where the sanitary service has been newly organized. Comparison tables of the cases reported in the army in the last two months show a marked decrease.
>
> The spread of typhus and cholera is being combated with a system of sanitary inspection in institutions and private homes in the cities and villages; the distribution of educational posters and literature emphasizing the importance of cleanliness and also "clean-up" campaigns known as "weeks of cleanliness," the installation of public baths, and the systematic disinfection of railroad cars, 34,000 of which were fumigated in January.

ENDOWMENT FUND GIFTS TO THE NEW YORK POST GRADUATE HOSPITAL.—Mrs. Henry R. Rea of Pittsburgh, Pa., has given $100,000 to the New York Post Graduate Medical School and Hospital's $2,000,000 Endowment Fund. Mrs. Rea's gift, given in memory of her parents, the late Henry W. and Mrs. Oliver of Pittsburgh, is to be used in advancing medical standards by providing for practicing physicians and surgeons additional opportunities for post-graduate study and research. Twenty or more scholarships are to be provided by the fund, and will be available to doctors unable to make the financial sacrifices heretofore required in giving up their practices during the periods of post graduate work.

Mrs. Rea's gift is probably unique among benefactions to educational institutions in that it is for the benefit of active professional men to increase their unselfishness to the community. The doctor's responsibility to the public and the handicaps under which he is placed in keeping abreast of medical progress were particularly apparent to Mrs. Rea during the war, when she served in a volunteer capacity as Field Director of the Walter Reed Hospital in Washington.

Terms under which the scholarships will be available to doctors are now under consideration by the Board of Directors of the Post Graduate Medical School. It is understood that assignment will be based on the recommendations of state and county medical associations. The records of doctors for public service in the communities will also be an important factor in the choice, together with the usual professional qualifications.

In addition to Mrs. Rea's gift, Mr. James C. Brady of New York has given $50,000 towards the first $1,000,000 and has pledged $125,000 to help in raising the $2,000,000. Mr. Vincent Astor has given $50,000 and has promised an additional $75,000 after the first $1,000,000 has been raised. The total amount of the fund at the present time is $329,000.

BOSTON AND MASSACHUSETTS.

THURBER MEDICAL ASSOCIATION.—The Thurber Medical Association held an influenza clinic on April 1 at the Nurses' Home of the Draper Memorial Hospital. The hygienic and administrative aspects of the prophylaxis and control of influenza were discussed by Dr. Donald B. Armstrong, executive officer of the Framingham health community demonstration. Dr. John M. French of Milford delivered an address on the use of bacterial vaccines in the prevention and treatment of influenza. There followed a general discussion of the causes of influenza and methods of treatment.

CASES OF HOOKWORM AT CAMP DEVENS.—Three men of the Regular Army troops stationed at Camp Devens have developed well defined cases of hookworm disease and are confined to the camp hospital for treatment and observation. The development of this disease in this latitude and climate is very unusual. No one of the three men afflicted was born or has seen service in tropical countries, where the hookworm malady is supposed to originate.

There are at present forty men with various diseases confined to a section of the original base hospital plant, which is being utilized as a camp hospital. The rest of the institution, capable of caring for more than two thousand patients, is closed.

THE BOSTON LYING-IN HOSPITAL.—The following statistics relative to the work of the Boston Lying-In Hospital have been published in the condensed annual report for the year ending December 31, 1919. There were admitted to the hospital 1,048 patients, of whom 92 per cent. were married. About one-fifth of these were free cases: the remainder paid on an average less than one-half of the cost of their care. The mortality was 20, or 1.9 per cent. The average daily number of adult patients admitted was 40, with an average stay in the hospital of 15.6 for delivered patients. Eight hundred and ninety babies were born and cared for.

In the Out-Patient Department, 6,992 visits were made to the pre-natal clinics by 2,698 patients. The importance of this service with the home supervision of the District Nurses and the Medical-Social Service Nurses cannot be overestimated. It means that practically all of the patients are first seen in these clinics, where any abnormal condition may be recognized and corrected if possible, or proper preparation made to meet the situation before the patient goes into labor. It is the means of saving many lives and relieving much suffering. One thousand two hundred and thirty-two patients were attended at confinement in their homes, involving about 12,400 visits by attending house officers and externes. There were 1,245 babies born and cared for by the Out-Patient Department.

Eight house physicians were given six months' intensive obstetrical training, 187 medical students were given special training, and 66 nurses with special obstetrical training were graduated.

During the last forty-seven years, 26,839 patients have been treated in confinement in the hospital; 26,156 babies have been born or cared for in the hospital; 51,028 patients have been attended in their homes, and 50,599 babies have been born or cared for in homes. Diplomas have been granted to 811 nurses and to 275 house officers. Four thousand eight hundred and fifty-three medical students have been given special training.

WEEK'S DEATH RATE IN BOSTON.—During the week ending April 10, 1920, the number of deaths reported was 255 against 292 last year, with a rate of 16.45 against 19.12 last year. There were 42 deaths under one year of age against 50 last year.

The number of cases of principal reportable diseases were: Diphtheria, 30; scarlet fever, 65; measles, 210; whooping cough, 80; typhoid fever, 1; tuberculosis, 43.

Included in the above were the following cases of non- residents: Diphtheria, 7; scarlet fever, 23; measles, 1; tuberculosis, 7.

Total deaths from these diseases were: Diphtheria, 5; scarlet fever, 1; measles, 3; whooping cough, 7; tuberculosis, 12.

Included in the above were the following non-residents: Diphtheria, 2.

Influenza cases, 13; influenza deaths, 2.

BEQUESTS TO MEDICAL INSTITUTIONS.—By the will of the late Mr. Grant Walker of Weston, the sum of $10,000 has been bequeathed to the Free Hospital for Women and $5,000 to the St. Luke's Home for Convalescents in Roxbury.

RED CROSS EXECUTIVE SECRETARY.—Mr. Seymour H. Stone has been appointed executive secretary of the Boston Metropolitan Chapter of the Red Cross. Mr. Stone has had a wide experience as a social worker. For several years he assisted the Boston Children's Aid Society. After serving in the Spanish War, he became superintendent of the New Jersey State Board of Children's Guardians. In 1904 he returned to Boston to take charge of the work of the Boston Children's Friend Society and in 1909 he became secretary of the Boston Tuberculosis Association. During the war Mr. Stone was engaged in War Camp Community Service work as supervisor for New England. In the summer of 1918 he entered the service of the American Red Cross overseas and was a member of the tuberculosis department in Italy.

GIFTS TO MEDICAL INSTITUTIONS.—The following bequests were made in the will of the late Mrs. James A. Woolson of Cambridge: $5,000 to the New England Deaconess Hospital, $3,000 to the Woman's Aid Association of the Cambridge Hospital, and $1,000 to the Cambridge Visiting Nurse Association. At the death of her husband, a bequest was made to the Cambridge Hospital for adding a wing to the building. As this sum was found to be insufficient, a sum not to exceed $10,000 was provided by the will of Mrs. Woolson to make up the deficit.

GREATER BOSTON MEDICAL SOCIETY.—The annual dinner and dancing party of the Greater Boston Medical Society was held on April 13 at the Hotel Somerset. Dr. Albert A. Shapira presided, and more than one hundred guests were present. The speakers of the evening included Dr. Louis Arkin, and Dr. Philip Castleman, president of the society.

MASSACHUSETTS HOMEOPATHIC SOCIETY.—The eightieth annual meeting of the Massachusetts Homeopathic Society was held on April 14 at the Homeopathic Hospital in Boston. During the morning, special clinics were held in the Out-Patient Department, at which interesting cases were presented and methods of treatment demonstrated.

During the business meeting of the afternoon committee reports were submitted by Dr. Herbert C. Clapp for the fund committee; Dr. Wesley T. Lee, legislative; Dr. Harry J. Lee, registration and statistics; and Dr. David L. Belding, elections. Dr. Frank A. Gardner, necrologist, also made a report.

Among the papers read were, "The Relation of Certain Factors of Hospital Administrational Work," by Dr. H. M. Pollock, superintendent of the Massachusetts Homeopathic Hospital; "Gastric Ulcer," by Dr. Charles T. Howard, surgeon of that hospital; and "Focal Infection, Some Complications and Sequelae," by Dr. W. F. Phillips, physician at the hospital.

At the annual dinner, held in the evening, Dr. Wesley T. Lee, president, addressed the society on "The Demoralization of Medical Practice."

NEW ENGLAND NOTES.

HEALTH DEPARTMENT OF MAINE.—The Health Department of Maine has been developed and reorganized during the past winter. Under the direction of Dr. Leverett Dale Bristol as health commissioner, with a staff of thirty paid workers and an advisory council, it has become thoroughly equipped to care for the physical well-being of the people of Maine. Modern health legislation has been introduced, scientific investigation organized, and systematic training of the people themselves in the principles of right living has been undertaken. A building on the east side of the Kennebec river in Augusta has been given over to the department of health and is the center of its administration. This building has two laboratories and several offices, yet the growing needs of the department have made it necessary to plan additions over the north and south wings. There are branches of the health department, under the direction of the local health officers, in the cities and towns throughout the state. The local health officers are supervised by district health officers, of whom there are eight, one in charge of each of the eight districts which have been organized.

Dr. Bristol, under whose supervision the local and district health officers carry on the work, has had extensive training and experience. He received the degree of Doctor of

Medicine at Johns Hopkins in 1907, and the degree of Doctor of Public Health at Harvard in 1918. He has been connected with the medical faculties of the universities of North Dakota, Minnesota, Syracuse, and Harvard, and has had a wide practical experience in his profession in hospitals and clinics and health departments in New York, Massachusetts, Connecticut, Minnesota, and North Dakota. He has been interested particularly in tuberculosis and cancer and has been officially associated with national, state, and local antituberculosis organizations. He is a member of the executive committee of the Maine Antituberculosis Association. Dr. Bristol holds the position of state registrar, and personally takes charge of the division of administration and of the division of vital statistics.

Other divisions of the health department are conducted under the general supervision of Dr. Bristol by division directors. The division of sanitary engineering takes care of the analysis of water, sewage, and dairy products and coöperates closely with the public utilities commission, which has charge of all the Maine water supplies. The diagnostic laboratory concerns itself with the work formerly done by the hygienic laboratory and has taken up additional lines of work, including free examination for tuberculosis, typhoid fever, infantile paralysis, cancer, and other diseases. Dr. A. G. Young, director of the division of communicable diseases, has served the health department for thirty-five years. Since its reorganization he has rendered invaluable service in preparing for the people of Maine information concerning the care, cure, and prevention of communicable diseases.

In recognition of the fact that coöperation with the public is necessary in order to gain effective results, the division of public education and publicity has been established in order to make expert knowledge available to the people. In this work the daily and weekly papers are coöperating in dispersing public health information. Other media for publicity work are a weekly news letter, a monthly Health News Bulletin, and a monthly scientific publication.

The public health council, of which Dr. Bristol is chairman, is the governing body of the state department of health. Its membership includes Dr. Sylvester J. Beach of Augusta, Mr. Hiram W. Ricker of Poland Springs, Dr. R. M. Small of Portland, and Mr. James O. Gulnac.

War Relief Funds.—New England War Relief Funds have announced the following amounts of total contribuations:

French Orphanage Fund	$579,761.87
Italian Fund	325,462.40
Argonne-Champagne Fund (closed)	10,674.50

Admission of Women to Medical Department of the University of Vermont.—Acting President G. W. Bailey of the University of Vermont and Dean H. C. Tinkham of the medical school have announced that women will be admitted to the medical department of the university next fall for the first time in its history. This action was decided upon by the board of trustees at the institution because of the great shortage of doctors throughout the rural districts of northern New England and New York state.

It is expected that although all courses will be open to women, few will take up surgery, the majority confining themselves to institutional and laboratory work and in studying children's diseases. There are a large number women in New England colleges who have had necessary preparation for this work.

Correspondence.

A SEVENTEENTH CENTURY PRESCRIPTION.

We have received recently a copy of the following interesting letter written by Dr. William Avery in the year 1663:

"Reverent Courteous and much esteemed:—

"I have according to my weak understanding considered of your request to me concerning the poor lame man, but the Lord that is only wise, though in a gracious and gentle manner, hath visited me so that I cannot come to your town at present. I do not understand what the malady is—whether it is a fistular or a cancer. If it be a fistular or foul ulcer it must have one way of dressing; but if it be a cancer it must be dressed another way. I fear it is a cancer and then sharp medicines will not prevail unless they be caustics and then there had needs be skilled hands to apply them. Actual cauteries is of all things considered most effectual and safest; yet it is very afflicting and is therefore not so frequently used. But if it be a fistular then it ought to be syringed with some restringent water, if it might be to the bottom to cleanse it. (Viz. take Verdigrease Alum and white copras of each an ounce made in fine powder, then take a quart of white wines or Smiths water being clarified, put in the ingredients into the water and make it boil a little, take off the scum with a feather and let it cool and then put the clear into a glass to syringe into the orifice and use that which is thick to dress the proud flesh withal and if you use it hot it will suppress it the more but if it be a cancer this will prevail very little. You may alſo make an ointment to dress the sore after it is washed: take Verdigrease in fine powder one ounce and then take as much resin and beeswax as a nutmeg of each of them, put them into a skillet and melt them, then take clear hogs suet 4 oz., put in that and melt it also, then put in your Verdigrease—beware it boils not over—and let it be mixed, then put in 2 oz. Turpentine, melt that and it is done. This ointment you will find very little inferior to that which is so highly considered by Surgeons called Ung. Epistolorum; with this you treat the sore after it is washed—or with the ointment called Egiptian it is made with Verdigrease honey and vinegar boiled to a red ointment but in these things I speak at a venture not knowing the case that I answer to but if anything had been propounded to consideration I should have given my advise though but weak or if I could have had more particular knowledge of the disease I might speak more fully to it but in the meantime I hope that which has been said will be no means to hinder the good woman from doing the best she can in the case that is of such necessity and though I can give no better advice at present yet I shall desire the Lord to direct her and bless her endeavors and rest yours to my favor though unworthy to be expressed.

William Avery.

from Dedham this 5th of the 3rd, 1663."

NARCOTIC DRUG BILLS IN NEW YORK LEGISLATURE.

New York, April 8, 1920.

Mr. Editor:—

The postponement of the hearing on the narcotic drug bills now before the New York Legislature until later in the session, should give the physicians of this state, as well as the public, an opportunity to be heard in regard to this form of legislation. One of these bills prohibits the fifteen thousand physicians of this state from treating cases of drug addiction otherwise than under enforced institutional restraint.

This bill has the endorsement of the State Medical Society given by its House of Delegates, a body which, as is well known, is not a scientific but a legislative one. This recommendation is founded upon the findings of a committee appointed a year ago by the state society, none of the members of which committee can be credited with any special knowledge on the subject of drug addiction. In addition, almost all those consulted by this committee and upon whose testimony they have based their conclusions, are interested in correctional, curative, or public medical institutions.

Drug addiction is now pretty definitely classified as a disease rather than a habit or a vice which it was claimed to be originally by those now interested in its institutional treatment. This being the case, physicians have been urged by those competent to advise them on the subject to study this disease and to treat these patients as they would those suffering from any other form of disease. On the other hand, repressive legislation of all kinds tends to force sufferers from drug addiction, whether curable or not, into the hands of institutionalists or into illicit channels of supply.

One of the methods most calculated to bring about these conditions is that of including drug addiction among the contagious diseases and compelling physicians everywhere throughout the state to report it to the authorities as is now done only in New York City.

A law of this kind coupled with the ruling already laid down defining a drug addict in this state as any one to whom morphine has been administered during a period of thirty days, would extend the control of the sanitary authorities to every case of sickness, acute, chronic, or incurable, in which this drug was thus employed. On this account alone any law of this character should be opposed, not only by the physicians of the state, but by the general public as well.

John P. Davin, M.D.

117 West 76th Street.

NO PHYSICIAN NOR SURGEON AS YET IN THE HALL OF FAME.

Mr. Editor:

Soon there will be the fifth quinquennial election to the Hall of Fame. The first took place in 1900 immediately after the funds had been given anonymously for the building of a permanent monument to the men and women who had contributed most to the nation's well-being and culture. According to the constitution drawn up at the time, it was agreed that at the first election fifty national figures in art, science, and history should be chosen and that thereafter five were to be added every five years.

The method of procedure in placing a man or woman's name on a tablet in the Hall of Fame is such as to allow no question or doubt as to the person's eligibility. The senate of the New York University, which is made up of the Dean and senior professor of each of the university schools with the presidents or other representatives of each of the great theological schools in or near New York City, chooses the electors. There are a hundred of these. Every state in the Union is represented by at least one man. These hundred men are chosen by virtue of their eminence in some branch of national culture. They fall into seven main divisions: authors, presidents of universities or colleges, scientists, professors of history, jurists, high public officials or men or women of affairs, and editors. When the names are sent in to the Senate of the University they are considered on the basis of constitutional qualifications. Not the least important of these qualifications is the one requiring that the nominee must have been deceased at least ten years.

It is with delight that we see, I believe for the first time, the name of a physician among the electors, the chosen one being Dr. Charles H. Mayo of Rochester, Minn. Perhaps this is a good omen and indicates that one of our own profession may at last be among the immortals. It is true that Oliver Wendell Holmes was a physician, but his name has been chosen for the Hall of Fame as belonging to Group I, authors, of which there are now 14. Group II are educators and number 4; Group III, preachers and theologians, 4; Group IV, philanthropists and reformers, 3; Group V, scientists, 5; Group VI, engineers and architects, none; Group VII, physicians and surgeons, none; Group VIII, inventors, 4; Group IX, missionaries and explorers, 1; Group X, soldiers and sailors, 4; Group XI, lawyers and judges, 4; Group XII, rulers and statesmen, 11; Group XIII, business men, none; Group XIV, musicians, painters, sculptors, 2; Group XV, eminent men outside of classes mentioned, none.

William T. G. Morton, the discoverer of ether anesthesia, had once been proposed under Group VII, but failed in the election. I do not know whether or not the constituiton of the Senate of the New York University permits a renomination. I hope there will be no barrier to renominating the "inventor and revealer of anesthetic inhalation, before whom in all time surgery was agony,"* and of whom Sir William Osler speaks as follows in his "Man's Redemption of Man:" "On October 16, 1846, in the amphitheatre of the Massachusetts General Hospital, Boston, a new Prometheus gave a gift as rich as that of fire, the greatest single gift ever made to suffering humanity. The prophecy was fulfilled—'neither shall there be any more pain;' a mystery of the ages had been solved by a daring experiment by man on man in the introduction of anesthesia."

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* From a monument erected to his memory at Mount Auburn, Cambridge, Mass.

The next two greatest figures in American medicine and surgery are perhaps Ephraim McDowel and J. Marion Sims. McDowel performed the first rational and deliberate ovariotomy, which he did in 1809, and of course, without an anesthetic; his patient living for 32 years after the operation. As is well known, J. Marion Sims (1813-1883) gained for himself a national and international reputation by his invention of the speculum as an instrument for the treatment of pelvic diseases in women, and by his perfecting the plastic operation in the vagina for the relief of vesical fistulae.

The nominations must be sent in to the Senate of the New York University, University Heights, New York City, before May first. Besides erecting the tablet in the Hall of Fame, the Senate of the New York University is now considering collecting the works, where it is possible, of all the men and women who have thus been honored by the nation. They hope in this manner to create a valuable "Americana," open for study and inspection.

I am sending this letter to as many of our American medical journals as possible so that each and every American physician who has a just pride in his profession at heart may do his share to see that a recognition to medical and surgical science equal to that of other professions is given at last. While there may be other great physicians and surgeons in the past generations who have distinguished themselves so as to be worthy to be classed with "America's Greatest," I venture to say none has surpassed the achievements of Morton, McDowel, and Sims. These were real pathfinders in science and added to human happiness and well-being and the glory of the American medical profession.

Let every American physician send one, two, or all three of these names to the above mentioned address of the Senate of the New York University, stating that this is his choice of America's great men for nomination for the Hall of Fame.

S. Adolphus Knopf, M.D.

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UNITED STATES CIVIL SERVICE EXAMINATION

Physician, Panama Canal Service, May 5 and July 7, 1920.

The United States Civil Service Commission announces an open competitive examination for physician, on the above dates, at the usual places of examination. Vacancies in the Panama Canal Service at the salaries indicated, and in positions requiring similar qualifications, at these or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The entrance salary is $200 a month; promotion may be made to $225, $250, $275, $300, and to higher rates for special positions.

Both men and women, if qualified, may enter this examination, but appointing officers have the legal right to specify the sex desired in requesting certification of eligibles. For the Panama Canal Service male eligibles are desired.

Applicants must be unmarried; must have graduated from a recognized medical school whose graduates are eligible for commission in the United States Army; and must have had at least one year's postgraduate hospital experience. Statements as to training and experience are accepted subject to verification.

Applicants must have reached their twenty-second but not their thirty-first birthday on the date of the examination. Age limits do not apply to persons entitled to preference because of military or naval service.

Applicants must submit to the examiner on the day of the examination their photographs, taken within two years, securely pasted in the space provided on the admission cards sent them after their applications are filed. Proofs or group photographs will not be accepted. Photographs will not be returned to applicants.

Before being permitted to sail for the Isthmus appointees must undergo a rigid physical examination by a designated physician after the appointment has been actually issued. There will be no charge for this examination, but the appointee must pay his transportation to the place of examination. The official physicians are located at the ports of departure and in a number of the large cities throughout the United States.

This examination is open to all citizens of the United States who meet the requirements.

Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board at the principal cities of the United States. Applications should be properly executed, including the medical certificate, but excluding the county officer's certificate, and filed with the Commission at Washington, D. C., in time to arrange for the examination at the place selected by the applicant.

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SOCIETY NOTICE.

Essex North District Medical Society.—The annual meeting of the Essex North District Medical Society will be held in Russell Hall, Y. M. C. A. building, 40 Lawrence Street, Lawrence (Tel. 1260) Wednesday, May 5, 1920.

Dinner will be served at 12.30 o'clock, sharp.

After the dinner, the business meeting will occur at 1.45.

The report of the committee on lodge practice will be discussed.

Papers will be presented as follows: Howard A. Streeter, M.D., A. A. Surgeon, United States Public Health Service, and Chief, Sub-division of Venereal Diseases, Department of Public Health of Massachusetts, upon "The Massachusetts Venereal Disease Program." (40 minutes.)

Alfred Worcester, M.D., of Waltham, President of the Massachusetts Medical Society, has accepted an invitation to be our guest. He will speak upon the matter of compulsory health insurance. (20 minutes.)

General discussion is invited (5 minutes each).

Meeting of the Censors will be held at Hotel Bartlett, Main Street, Haverhill, (Tel. 8710) on first Thursday in May and in November, at 2 p.m., sharp. Candidates for admission to the Society should present their diploma to the Secretary of the Society two weeks in advance.

Will each Fellow invite worthy non-members to confer with the Secretary?

J. J. O'Sullivan, M.D., *President*,
J. Forrest Burnham, M.D., *Secretary*,
301 Essex St. (Room 411), Lawrence, Mass.